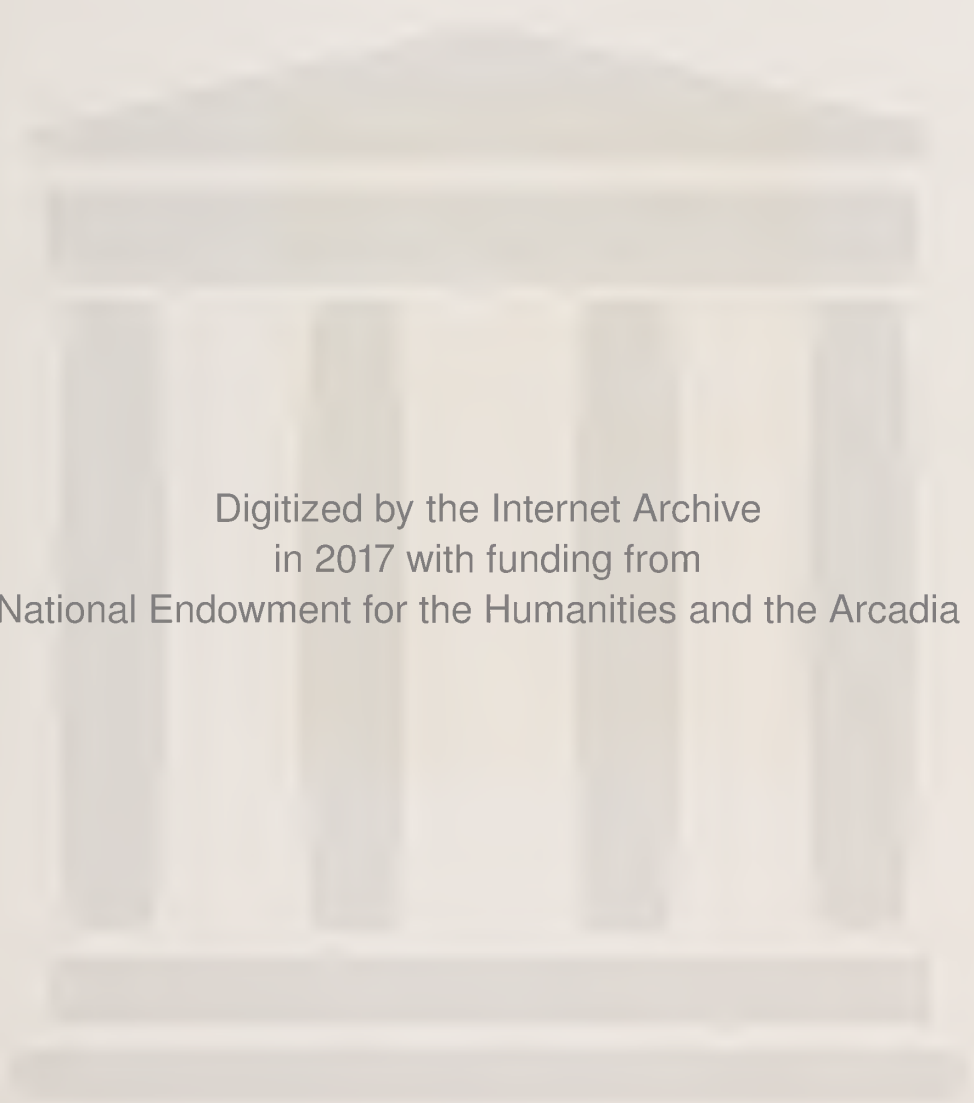


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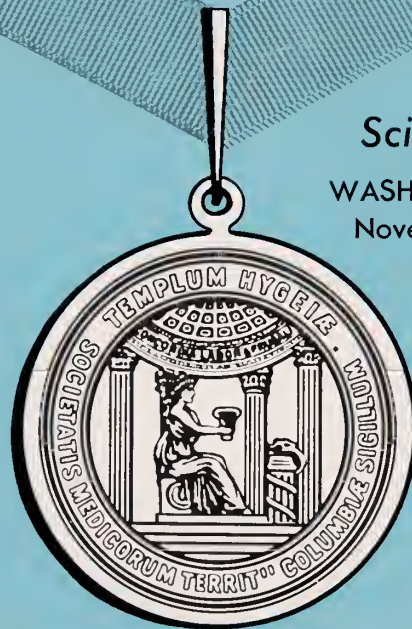
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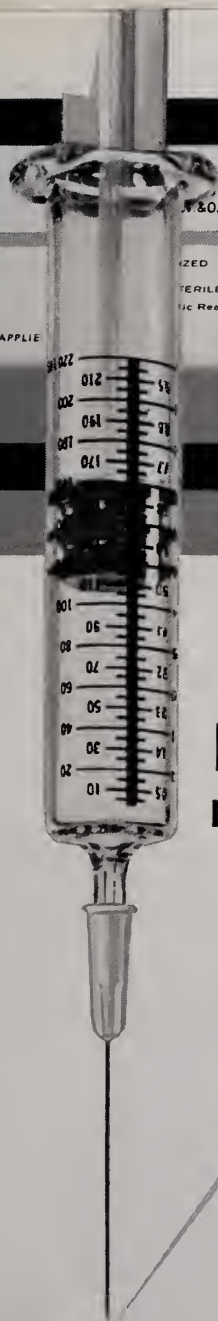
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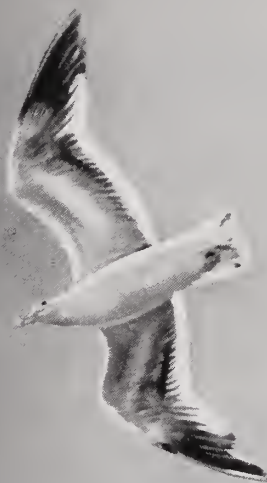
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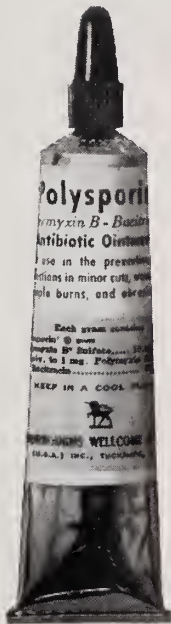
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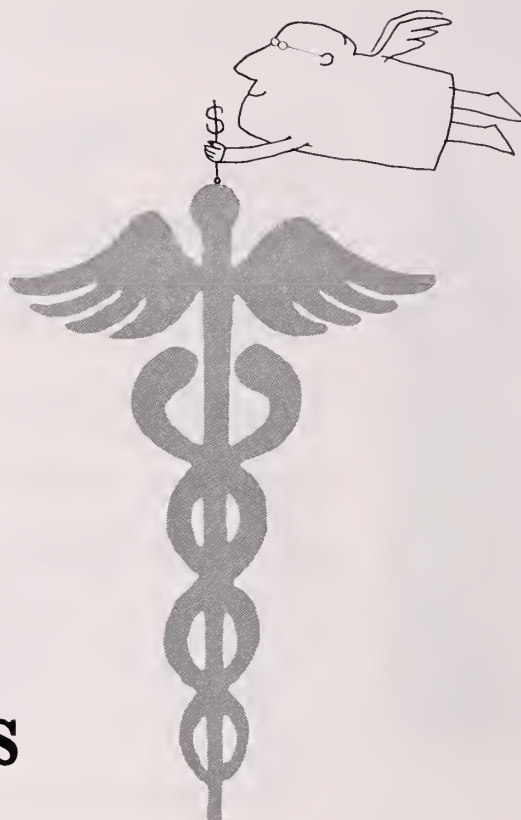
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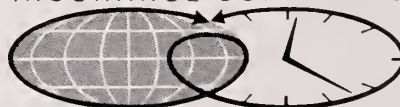
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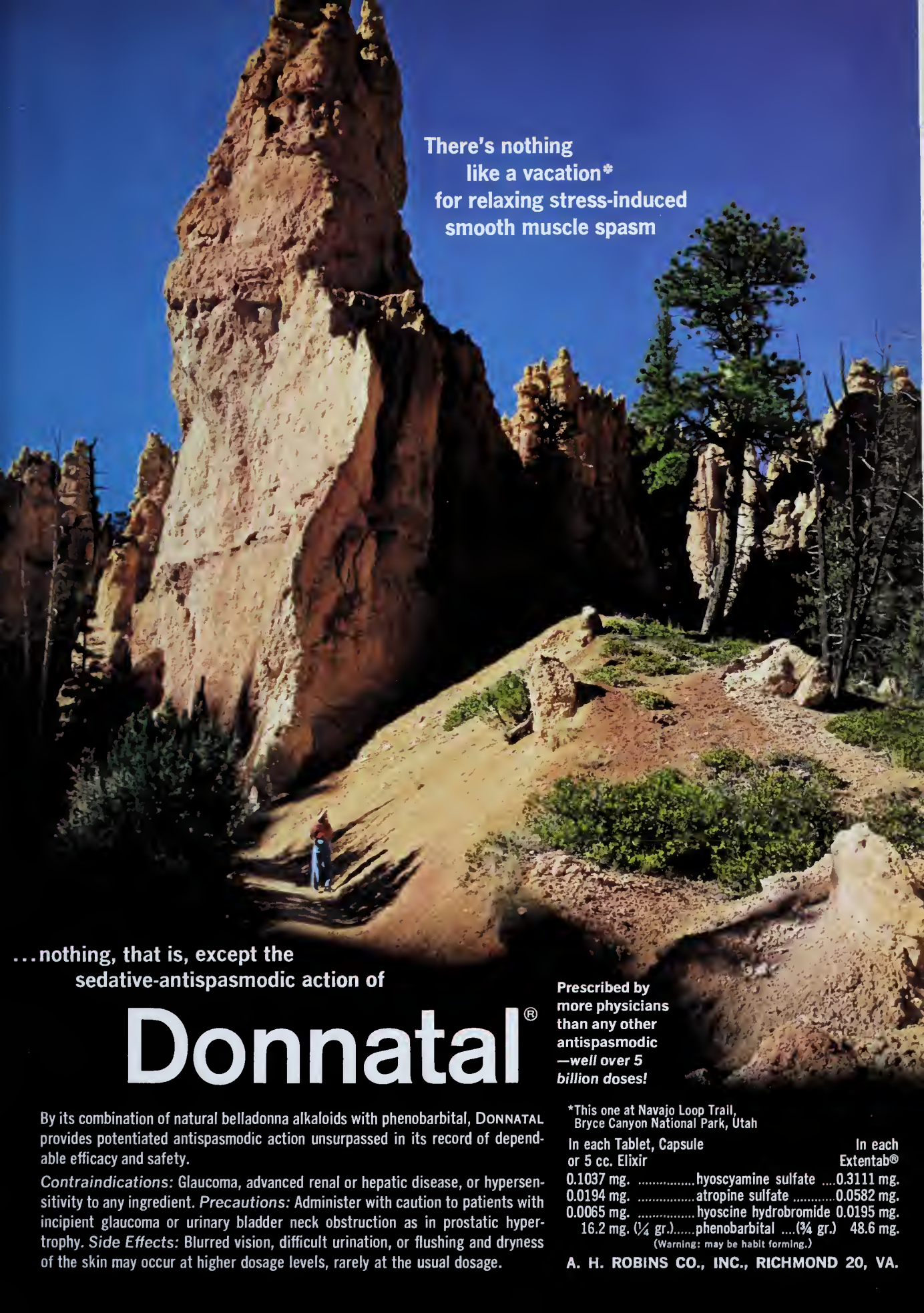
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BOOKS RECEIVED

Acknowledgment is made of the following books which have recently been received.

Physiology of the Eye. Clinical Application, 4th ed. FRANCIS HEED ADLER, M.A., M.D., F.A.C.S. Price, \$18.75. Pp. 889, with 437 illustrations, including 2 in color. St. Louis: Mosby, 1965.

Current Therapy 1965. Latest Approved Methods of Treatment for the Practicing Physician. Edited by HOWARD F. CONN, M.D. Price, \$13.00. Pp. 801. Philadelphia: Saunders, 1965.

Synopsis of Clinical Tropical Medicine. Pathogenesis, clinical picture, diagnosis, prognosis, and therapy. OSCAR FELSENFELD, M.D., M.Sc. Price, \$9.85. Pp. 378, with 40 illustrations. St. Louis: Mosby, 1965.

Fundamentals of Orthopaedics. JOHN J. GARTLAND, A.B., M.D. Price, \$8.00. Pp. 338, with 158 illustrations. Philadelphia: Saunders, 1965.

Preventive Medicine. Principles of Prevention in the Occurrence and Progression of Disease, 2nd ed. Edited by HERMAN E. HILLEBOE, M.D., AND GRANVILLE W. LARIMORE, M.D. Price, \$12.00. Pp. 523, illustrated. Philadelphia: Saunders, 1965.

Leopold's Principles and Methods of Physical Diagnosis, 3rd ed. HENRY U. HOPKINS, M.D. Price, \$8.50. Pp. 503, with 339 illustrations. Philadelphia: Saunders, 1965.

With Every Breath You Take. The Poisons of Air Pollution, How They Are Injuring Our Health, and What We Must Do About Them. HOWARD R. LEWIS. Preface by Reginald H. Smart, M.D. Foreword by Morris B. Jacobs, Ph.D., P.E. Price, \$5.00. Pp. 322, illustrated. New York: Crown, 1965.

Disseminated Intravascular Coagulation. An Intermediary Mechanism of Disease. DONALD G. MCKAY, M.D. Price, \$16.00. Pp. 493, with 204 illustrations, 7 in full color. New York: Hoeber Med. Div.-Harper & Row, 1965.

This Is Psychiatry. FELIX VON MENDELSSOHN, M.D. Price, \$7.95. Pp. 237. New York: Franklin Watts, 1964.

Heart Attack: New Hope, New Knowledge, New Life. For those who have suffered a coronary thrombosis and for those who have not but wish to avoid it. MYRON PRINZMETAL, M.D. In Collaboration with William Winter, Patient. With a Preface by Walter C. Alvarez, M.D. Revised and Updated Edition. Price (paper), \$1.75. Pp. 232. New York: Simon and Schuster, 1965.

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*Dorhout Mees, E.J., and Geyskes, G.G.: Acta med.scandinav. 175:703, 1964.

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Clinical Effectiveness of Ethionamide in the Treatment of Drug-resistant Pulmonary Tuberculosis

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THE RESULTS of clinical trials with ethionamide, first reported in this country in 1959,¹ continue to appear in the current literature. Although an occasional report is unfavorable,² ethionamide is considered a potentially good companion drug in the treatment of the chronic drug-resistant cases of pulmonary tuberculosis.^{3, 4, 5}

The purpose of the present study was to determine the effectiveness of ethionamide in the treatment of a selective group of patients with pulmonary tuberculosis. The degree of toxicity to ethionamide, sputum conversion, X-ray clearance, and relapse rate were criteria used for determining its effectiveness.

Materials and Methods

Sixty-one patients were selected for this study. This group comprised patients with chronic, far-advanced cavitary pulmonary tuberculosis which failed to improve on various combinations of antituberculosis drugs. They had been hospitalized for periods varying from 10 months to 33 years (1 patient) as a single admission or on successive hospital admissions. Sixty patients had positive bacteriologic evidence of pulmonary tuberculosis on microscopy and by culture at the time of their selection for inclusion in this study. All were on isoniazid in combination with various other drugs and had shown

varying degrees of resistance to these drugs. They were, in essence, considered as therapeutic failures, and any improvement from ethionamide therapy would be clinically significant for any patient in this group. Twenty-seven patients were classified as chronic alcoholics.

The dosage of ethionamide† was 750 mg. daily in divided doses. Each patient, prior to ethionamide therapy, was evaluated clinically and laboratory-wise for evidence of systemic diseases other than pulmonary tuberculosis. The laboratory tests included a complete blood count and urinalysis, blood urea nitrogen, brom-sulfalein and serum transaminase, and gastrointestinal X-ray examinations as indicated. After institution of ethionamide therapy the same laboratory tests were performed at monthly intervals. Attempts were made to correlate any abnormal clinical or laboratory findings with the use of ethionamide. Initially, no patient showing laboratory or clinical evidence of liver disease was treated with ethionamide. Later in the study, however, 4 patients showing laboratory evidence of liver disease, as evidenced by an abnormal BSP test in each and an elevated serum transaminase in 1, were added to the study. (In showing drug resistance and clinical deterioration, ethionamide therapy was instituted as a last resort.)

* A facility of the Department of Health, District of Columbia.

† In the form of Treacator (Ives Laboratories, New York, N. Y.).

A pretreatment chest X-ray film was taken, and a 72-hour sputum for bacteriologic evaluation was obtained on each patient. For serial comparison these were repeated at monthly intervals while ethionamide was being used. A sensitivity study was requested on each positive culture. Improvement was read on chest X-ray films when there was noted clearing of parenchymal lesions, decrease in size of a cavity, or both on serial X-ray comparison. The reverse was considered a therapeutic failure. A true sputum conversion was recorded when a patient showed a negative status for at least 6 consecutive months.

Isoniazid was continued in all patients when ethionamide was added to a drug regimen. No specific third drug was used in the patients on a 3-drug regimen except that pyrazinamide was not included in any drug regimen in this study.

Results

Of the 61 patients in this study only 24 remained on ethionamide therapy longer than 6 months. Of these, 16 were treated for 6 to 12 months and 8 for as long as 18 months. In the remaining group of 37 patients 15 took the drug for 3 days to 3 months and 22 for 3 to 6 months. In the latter group 7 failed to remain in the hospital and 3 died while on ethionamide therapy; therefore, only 27 patients can be adequately evaluated in this group.

Almost without exception at a dose level of 750 mg. daily each patient experienced some degree of gastrointestinal reaction to ethionamide. Nausea was the chief complaint, while other reactions consisted of epigastric discomfort, anorexia, and rarely diarrhea and vomiting. Most of these were minimal in severity and responded to symptomatic therapy. Other systemic effects were rarely experienced. Of the 27 patients who took ethionamide less than 6 months, reactions to ethionamide therapy necessitated discontinuation of therapy in 16. Gastrointestinal reactions occurred in 13, a dermatitis in 1, and a febrile reaction in another; dizziness and giddiness necessitated discontinuation of therapy in 1 patient. No significant degree of toxicity to ethionamide persisted in any patient taking the drug longer than 6 months. In the 4 patients who showed abnormal liver function tests at initiation of ethionamide therapy no further hepatic deterioration was noted in any after 7 to 11 months on ethionamide. The BSP test remained abnormal in each, while the serum transaminase returned to a normal level. In 3

other patients increase in BSP retention was noted. On evaluation these proved to be secondary to severe gastrointestinal intolerance to ethionamide, and the test returned to normal in each on subsidence of symptoms.

Since, by definition, no patient taking ethionamide less than 6 months could achieve a negative bacteriologic status, only 24 patients can be adequately evaluated for sputum conversion. Nine of these, including 1 with a positive empyema drainage, became negative on microscopy and by culture. These patients showed either X-ray improvement or stability, but no chest X-ray film showed complete clearing. Twelve of this group showed no change on the X-ray films, and the sputum remained positive in each. Three were treated for more than 12 months. The remaining 3 showed transient evidence of negativity (more than 3 but less than 6 monthly negative sputa) and may be considered as examples of drug escape or of relapse. In the group of 27 patients taking ethionamide for less than 6 months, 5 showed a negative sputum status at the time ethionamide was discontinued (for reasons other than failure to respond to ethionamide), and 7 showed X-ray progression while 4 others showed no change but were dropped from the study when a drug change was made.

Discussion

Toxicity secondary to the use of ethionamide, chiefly gastrointestinal in origin, has been the most consistent observation in reported clinical studies. This has been our experience with the drug, and it no doubt adversely affects the clinical efficacy of ethionamide or at least makes it difficult to determine it adequately. Of 51 patients evaluated in this study, 27 were treated for less than 6 months. In 16, or 59 per cent, of these 27 patients ethionamide was discontinued because of severe side-effects. Only 11 of these patients, therefore, can be considered as showing failure to respond to ethionamide. The side-effects occurred early in the study and appeared to decrease in frequency and severity with increasing length of therapy until after 6 months they approached zero. No patient experienced side-effects after 6 months of ethionamide therapy severe enough to necessitate discontinuation of therapy. Only in the latter group of patients could an adequate evaluation of ethionamide be made. Nine, or 37.5 per cent, of 24 patients treated for more than 6 months with ethionamide achieved a negative sputum status

with or without concomitant X-ray improvement, while 12 patients (55 per cent) showed no change. Three patients, after showing response to therapy initially, later escaped from the favorable action of ethionamide on their disease.

More recent reports have suggested that ethionamide is potentially hepatotoxic, and both clinical jaundice and abnormalities in certain liver function tests have been noted.⁶⁻⁹ We have previously reported our observations in this regard.¹⁰ Six of our patients had diabetes mellitus, and 27 were classified as chronic alcoholics, but we experienced no evidence of hepatotoxicity secondary to ethionamide therapy. Furthermore, 4 patients with abnormal BSP tests at the initiation of ethionamide therapy showed no further deterioration in hepatic function while on therapy for 7 to 11 months. The diversity of opinion relative to the hepatotoxicity of ethionamide is perplexing to us. This study of significance in this regard, we believe, differs from most of the reported studies in that only 750 mg. of ethionamide was used as against 1 Gm. or more daily in most other studies. As suggested by Lees,¹¹ this latter dosage level on a dose to weight basis may be too high, and this may be offered as a possible explanation for the occasional occurrence of hepatotoxicity secondary to ethionamide therapy.

Follow-up studies of the 9 patients achieving a negative status showed that 1 had come to pulmonary resection (pneumonectomy) with an uncomplicated postoperative course. Eight of these patients have been discharged to outpatient follow-up. With as long as 18 months of ethionamide therapy in 3 of them, none of the 9 have relapsed.

Considering that all of these patients were considered therapeutic failures or pulmonary cripples, we have been impressed with ethionamide in this study. A clinical response in 37.5 per cent of 24 patients on therapy longer than 6 months seems to be an achievement worthy of continued use of this drug in the treatment of such cases.

Summary

The clinical response of 51 patients with chronic, far-advanced, drug-resistant pulmonary tuberculosis to ethionamide has been reported. All received 750 mg. of ethionamide

daily in divided doses. Isoniazid was maintained in each drug regimen, but no patient was treated with pyrazinamide.

Only 24 patients remained on ethionamide longer than 6 months. Of this group 9 achieved a negative bacteriologic status, 12 failed to respond to therapy, and 3, after an initial response, escaped from the beneficial effects of ethionamide. No patient in this group experienced serious side-effects from the use of ethionamide after the sixth month of therapy.

Severe side-effects, mainly gastrointestinal in origin, necessitated discontinuation of ethionamide in 16 of 27 patients who were treated with ethionamide for less than 6 months. This factor proved to be the chief disadvantage of ethionamide therapy and apparently limited greatly its potential clinical efficacy during the first 6 months of therapy. No significant hepatotoxicity was observed at a dose level of 750 mg. daily, and a probable explanation for this in view of more recent reports in this regard is the relatively small dosage.

In view of the types of cases studied both as individual patients and as a group, the results of this study are gratifying, and, therefore, in spite of the severe side-effects secondary to the use of ethionamide, the drug is a worthwhile addition to our present antituberculosis drug armamentarium.

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Washington, D. C. 20011

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The Factor of Acute Fluid Sequestration in Postcraniotomy Shock

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WE HAVE RECENTLY had the occasion to care for a patient who had a hemangioblastoma of the right cerebellar hemisphere. It was removed and in the immediate postoperative period shock supervened. The principal mechanism responsible for the development of the shock was judged to be rapid sequestration of fluid into an adynamic gastrointestinal tract, thereby causing an acute reduction in the effective circulating blood volume.

The case report follows and is supplemented by a graph illustrating some of the vital data which we recorded.

Report of Case

A 28-year-old officer was admitted to Walter Reed General Hospital on November 8, 1962 following the onset during the week prior to admission of an occipital headache, a tendency to fall to the left, slurred speech, clumsiness and dizziness. His antecedent health had been excellent.

He was a well-developed Caucasian, 73 inches tall and weighing 80 Kg. Vital signs were within normal limits. He was alert, cooperative and oriented. The pupils were equal and reacted to light and accommodation. Visual fields, visual acuity, and the appearance of the ocular fundi were normal. Nystagmus was elicited on right lateral gaze. There was slight impairment in the ability to perform rapidly alternating movements, more apparent on the right side. He had a tendency to fall to the left while standing or walking.

Laboratory studies on admission or shortly thereafter were normal: hemoglobin concentration, hematocrit, white blood cell count, urinalysis, blood urea nitrogen, fasting blood sugar, skull roentgenograms, and an electroencephalogram. A lumbar puncture yielded clear, colorless, cerebrospinal fluid under

normal pressure; the cell composition, electrolyte, glucose and protein concentrations were all normal.

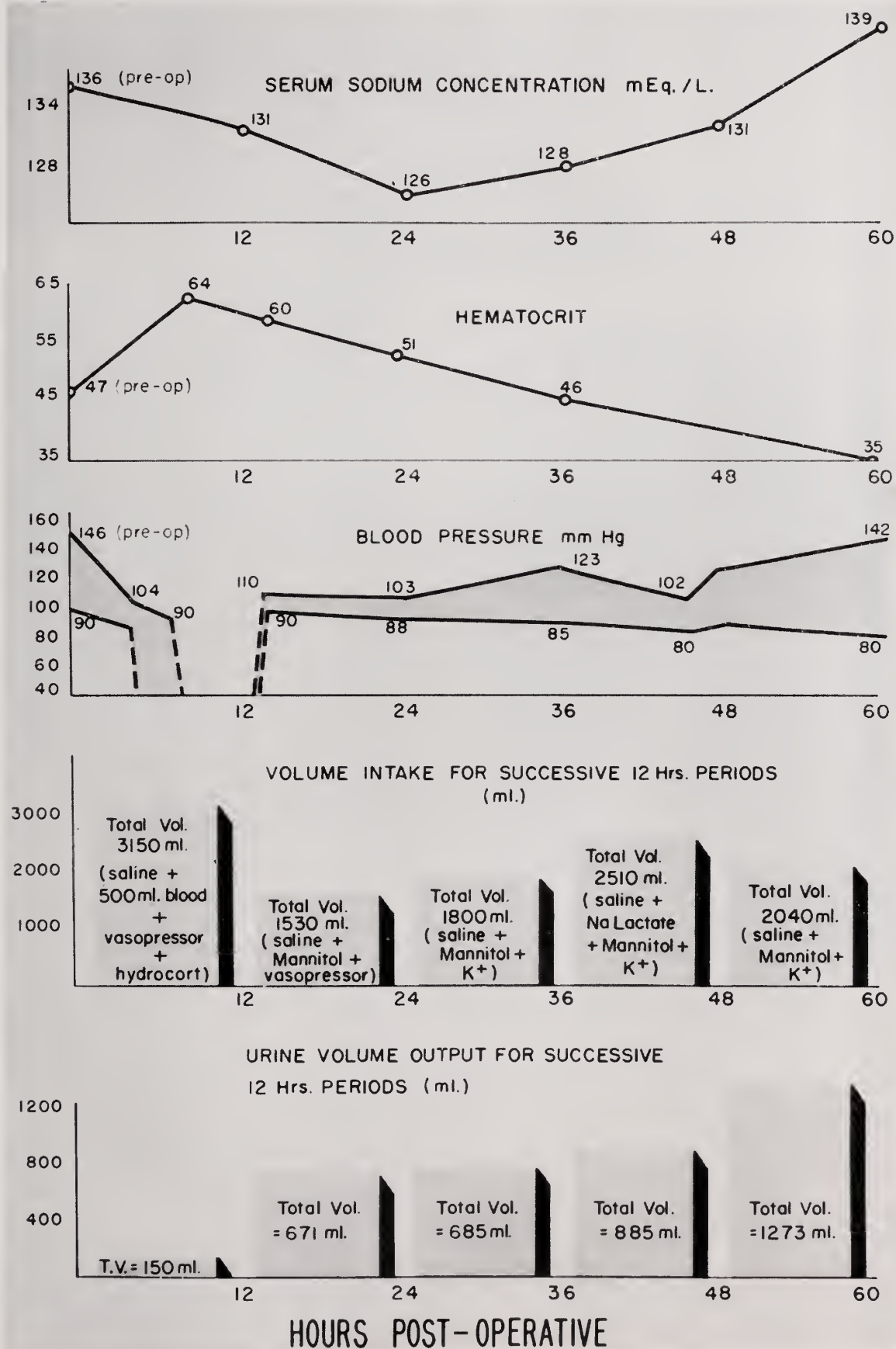
On November 19 a fractional pneumoencephalogram was attempted, but the ventricular system failed to fill. The pericallosal cistern was dilated, and the cerebellar tonsils were visualized below the foramen magnum. The patient was promptly taken to the operating room, where, under general endotracheal halothane anesthesia, a suboccipital craniectomy was performed. The right cerebellar hemisphere was found to be almost completely replaced by a fluid-filled cyst. A mural nodule, 1 by 1 cm. in size, was totally excised. Histologic examination proved it to be a hemangioblastoma.

Just prior to the operation the hematocrit was found to be 47, the serum sodium 137 mEq./L, serum chloride 103 mEq./L, serum CO₂ 25.2 mEq./L, and serum potassium 4.1 mEq./L.

Estimated blood loss during the operation was 500 ml., which was replaced during surgery.

The patient was taken to the recovery ward breathing spontaneously; the vital signs were normal. However, within 4 hours following the completion of the operation the blood pressure began to fall. Approximately 7 hours postoperatively the blood pressure was unobtainable, the pulse was rapid and thready, and the urine output fell to oliguric levels (see graph). The patient remained comatose. The temperature was kept below 102°F with iced alcohol spongebaths. The respiratory rate ranged between 28 and 40 per minute. The abdomen was soft, nondistended, and silent. Despite the infusion of 500 ml. of whole blood and 2,650 ml. of normal saline with vasopressor and hydrocortisone, the shock state continued until approximately 14 hours postoperatively, at which time the blood pressure returned and the urine output became normal.

The hematocrit was determined 8 hours postoperatively and was found to be 64. At the same time a serum sodium concentration was 131 mEq./L,



serum chloride 100 mEq./L, serum CO₂ 21.5 mEq./L, and serum potassium 3.7 mEq./L.

The abrupt rise in hematocrit associated with a fall in the serum sodium concentration indicated an isotonic fluid loss in excess of red blood cell loss. (If we assume a stable red blood cell volume, for the purpose of calculating, a plasma volume loss of approximately 25 per cent of the total blood volume would have had to occur to effect the rise in hematocrit to 64.* Parenteral fluid therapy and the possibility of occult hemorrhage render the calculation less valid; however, by means of the calculations, an estimate of the approximate fluid loss may be acquired.)

The significance of the hematocrit rise became fully apparent 24 hours later when more than 3,000 ml. of fluid was suctioned from the stomach.

Twenty-four hours postoperatively radioactive iodinated serum albumin was used to determine the blood volume; total blood volume was 50 ml./Kg. Since the hematocrit, determined concurrently, was 51, the calculated plasma volume was 24.5 ml./Kg. (normal—40 ml./Kg.) and the calculated red cell volume 25.5 ml./Kg. (normal—30 ml./Kg.). These values confirmed the existence of hypovolemia and corroborated the assumption that the principal factor was a reduction in plasma volume.

Thereafter a satisfactory urine output continued and the vital signs remained stable (see graph). Continuous gastric suctioning yielded 1,500 ml. per 24 hours of greenish fluid on the third and fourth postoperative days.

The remainder of the convalescence was unremarkable except for gastrointestinal bleeding, which required 4,500 ml. of whole blood in divided amounts between the fourth and twelfth postoperative days.

The patient gradually regained consciousness and became responsive by the fourteenth postoperative day. Recovery has been slow but continually progressive. Six months after the operation the patient still had right cerebellar signs. He also showed evidence of cerebral cortical impairment, undoubtedly due to the prolonged postoperative shock.

Nine months later we removed a medulloblastoma from the right cerebellar hemisphere of a 39-year-old woman and reëncountered the same type of shock mechanism. Having been sensitized to the possibility of its occurrence, we instituted early gastric suctioning and a vigorous fluid therapy regimen, and a rapid return of circulatory competence ensued.

Discussion

The close relationship which exists between the central nervous system and the gastrointestinal tract, with regard to both normal and morbid physiology, has been known for more than a century. Cushing,¹ in his monograph concerned with neurogenically-induced erosions of the alimentary tract, reëmphasized the ability of the central nervous system to effect profound alterations in gastrointestinal function and integrity.

By 1940 the concept of hypothalamic control of gastrointestinal secretion, motility, and tone had become generally accepted.² Standard texts now acknowledge the association of central nervous system affections, iatrogenic or natural, with adynamic ileus and acute gastric dilatation.^{3, 4} Equally well appreciated is the possibility of hypovolemic shock occurring in association with a gastrointestinal tract which has lost its normal motility and tone.⁵ However, there is a conspicuous lack of reports in the literature concerned with the association of hypovolemic shock consequent to fluid loss into the gastrointestinal tract and brain injury whether surgically or traumatically induced.

We submit that diverse affections of the brain, intracranial surgery in general, and posterior fossa surgery in particular are capable of causing an acute loss of gastrointestinal motility and tone. Rapid sequestration of isotonic fluid into the gastrointestinal tract may then occur and result in shock secondary to hypovolemia. The collection of fluid into this "third space," although rapid and massive, may be occult. Classically, it reveals itself through an abrupt rise in hematocrit and is differentiated from true dehydration (desiccation) by the concomitant fall in the serum sodium concentration. It may augment the effect of an otherwise occult gastrointestinal hemorrhage, the 2 together producing shock. If the fluid loss is associated with hemorrhage, hypovolemic shock may occur without a commensurate increase or decrease in the hematocrit.

The absence of reports in the literature may be a reflection of failure to recognize the process because of its occult nature rather than a true indication of its rareness.

Summary

By presenting a case history which exemplified the various clinical features we have emphasized the significance of acute sequestra-

* Total blood volume (BV) = 7 per cent of body weight = 5,600 ml.

Hematocrit/100 (Hct) = Red cell volume/BV (RCV); then pre-op RCV = .47 × 5,600 = 2,632 ml.

New Hct = 64; since Hct/100 = RCV/BV, new BV = (2,632 ml. × 100)/64 = 4,113 ml.

Blood volume loss then = 5,600 ml. - 4,113 ml. = 1,487 ml. or 25 per cent of BV.

Roentgenologic Changes in the Cervical Spine in Rheumatoid Arthritis

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DESCRPTIONS of the clinical, pathologic and radiographic findings in rheumatoid arthritis are numerous, and most of the changes in the joints of the extremities are well known. Less well known are the distinctive changes occurring in the spine in rheumatoid arthritis as opposed to ankylosing spondylitis. While sharing some features in common, these 2 variations of rheumatoid disease can be quite different in their roentgenologic manifestations.

The cervical spine is frequently involved in classical rheumatoid arthritis. The radiographic changes of rheumatoid arthritis common to the spine as a whole are seen in this segment as well as distinctive findings dependent upon its unique anatomic features.

The plane of the articular facets at the atlantoaxial articulation is such as to make the anatomic integrity of the joint depend largely upon the transverse atlantic ligament. Imposed between this ligament and the posterior border of the dens is a small joint cavity containing synovial tissue.¹ Pannus formation in this small joint leads to softening and destruction of the transverse ligament.² Extensive erosion of the dens can also occur.³ Either of these changes permits anterior dislocation of the atlas with respect to the axis, and varying degrees of spinal cord compression can result.⁴

Atlantoaxial subluxation is detectable on a lateral X-ray film of the cervical spine. The distance between the anterior atlantic arch and the dens varies somewhat with the age and sex¹ but probably does not exceed 2.5 mm. in the normal adult cervical film.⁵ A small increase in this distance may be the only evidence of subluxation. Particular attention to this distance is important, especially in patients with known rheumatoid arthritis complaining of cervical pain, with or without neurologic findings.

The atlantoaxial subluxation may not be evi-



FIG. 1. No significant subluxation of the atlantoaxial joint demonstrable with head in neutral position. There is no ossification of the paraspinal ligaments and no ankylosis of the posterior vertebral joints.

dent with the head in a neutral position, and a film in flexion is often required for its demonstration. Martel,¹ in reporting 29 patients with abnormal atlantodentoid separation, found that flexion views were required for diagnosis in 23 (figures 1 and 2).

Abnormal increase in the atlantoaxial distance may occur in either classical rheumatoid arthritis or ankylosing spondylitis. Subluxation of the



FIG. 2. Same patient as in figure 1 with film in flexion, which demonstrates an abnormal distance between dens and anterior arch of atlas.

cervical spine at lower levels is not characteristic of ankylosing spondylitis but occurs in rheumatoid arthritis (figure 3). Atlantoaxial subluxa-



FIG. 3. Tomogram of cervical spine demonstrating subluxation of atlantoaxial joint, erosion of odontoid process, narrowing of intervertebral discs, erosion and sclerosis of vertebral end-plates, and subluxation of C-3 on C-4.

tion as an isolated finding has in our experience been characteristic of rheumatoid arthritis rather than ankylosing spondylitis (figure 4).

Martel found erosion of the odontoid cortex to be more frequently demonstrated in rheuma-

toid arthritis, but bony ankylosis of the odontoid to the anterior atlas or basilar process in a number of patients with ankylosing spondylitis may have interfered with the demonstration of odontoid erosion (figure 3). Such bony ankylosis has, in our experience, been more characteristic of ankylosing spondylitis than rheumatoid arthritis.

Extensive ossification of the spinal ligaments and ankylosis of the posterior vertebral joints, hallmarks of ankylosing spondylitis, are often conspicuously absent in rheumatoid arthritis (figures 1-4). Martel found 2 patients with



FIG. 4. Only cervical manifestation of rheumatoid arthritis demonstrated is increased distance between dens and anterior arch of atlas indicative of atlantoaxial subluxation.

rheumatoid arthritis who exhibited ankylosis of the posterior vertebral joints, but neither had ossification of the paraspinal ligaments, and the disease began in childhood in both.

Destruction and narrowing of the intervertebral discs and erosion of the vertebral end-plates are features of rheumatoid arthritis rather than ankylosing spondylitis. In the latter the discs may be somewhat thinned but are comparatively well preserved. The disc narrowing may at times resemble that seen in degenerative arthritis but is characteristically at a higher level than the usual C-5, C-6 and C-6, C-7 levels of involvement in osteoarthritis (figure 3).

(Continued on page 323)

Prolonging the Interval Between “Hyposensitizing” Treatments of Hymenoptera Patients

Preliminary Observations

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TO PATIENTS suffering from inhalant allergies one of the disadvantages of “hyposensitization” with aqueous extracts is the fact that the maintenance dose must be repeated every 3 or 4 weeks throughout the year. Otherwise the patient may experience a “constitutional” or generalized reaction to the injections.

During a decade’s experience in “hyposensitizing” patients who had suffered anaphylaxis or asthma from the sting of a hymenopterous insect (bee, hornet, wasp or yellow jacket) it became apparent that some patients could tolerate the injections at longer intervals without untoward effect.

Materials and Methods

Twenty patients aged 10 to 55 years who had suffered a severe generalized reaction following the sting of a single hymenopterous insect were studied allergically. Their major symptoms had been loss of consciousness, convulsions, asthma, generalized edema, swelling of the throat, and generalized urticaria occurring within a few minutes of the sting. Some of the patients also had experienced a big local swelling about the site of the sting.

After a medical history and a physical examination had been recorded for each patient, intracutaneous testing was performed with 0.01 ml. of extracts of the 4 common Hymenoptera—honey bee, hornet, wasp, and yellow jacket. Skin tests were positive in all patients, the threshold (a 1-plus reaction on the basis of 4 grades) varying between 0.01 and 1 protein-nitrogen unit (PNU). (The testing solutions contained 1, 10,

or 100 PNU/ml.) All patients were titrated; each was tested with at least 3 dilutions of each extract so that 1 was negative, 1 was at threshold level, and 1 gave a 4-plus reaction.

The extract* used for “hyposensitization” contained the antigens either of a single species or of a mixture of 4 Hymenoptera. If the insect had been identified to our satisfaction (by observation, or by a description of its shape, its nest, and the circumstances under which stinging had occurred), and if the skin tests were unequivocally positive to this insect and not to the others, an extract of this insect only was administered for “hyposensitization.” If, however, the identity of the culpable insect was uncertain and extracts of all 4 Hymenoptera gave equally positive tests, a mixed extract (containing equal amounts of venom of the 4 Hymenoptera) was used. The average top dose of extracts received by the patients was 5,000 PNU.

At weekly intervals the patients received subcutaneous “hyposensitizing” injections, starting with the dilution that had caused a frankly positive skin test. If the local reaction reached 3 inches in diameter and had disappeared in 36 to 48 hours the dose was increased at the following visit. If the local reaction was larger than 3 inches and lasted longer than 48 hours the previous dose was repeated or a smaller increment made. Doses were gradually increased until the patient received 5,000 to 6,000 PNU in a single injection. This dose was repeated several times at monthly intervals to make certain that it was tolerated comfortably. In most cases this event

* Hollister-Stier Laboratory, Yeadon, Pa.

occurred 6 to 12 months after starting "hypo-sensitization."

At this point the interval was increased by 1 week at each visit, occasionally by 2 weeks, up to 16 weeks.

Results

All 20 patients tolerated the doses. No constitutional reactions to treatment were observed even though in some patients early in the course a given dose had to be repeated several times because of large local reactions on the arm.

At present 3 of the 20 patients are receiving their 5,000 PNU at intervals of 16 weeks; 7 of the 20 at intervals of 14 weeks, and 10 at intervals of 10 weeks. Most patients reached the 12- to 16-week interval by the third year.

suffered mild generalized symptoms. One, who was stung on the lip, developed hives about the face. When stung again the succeeding year on the abdomen, he suffered only a big local reaction. Another patient, stung on the scalp, developed swelling of the palm.

Pertinent to every sting there are a number of factors that make evaluation of treatment difficult. One is the variability in the site of the sting. Stings on mucous membranes and the scalp cause reactions rapidly, perhaps because of their greater vascularity. Another factor is the identity of the insect causing subsequent stings. For example, a patient whose original reaction is to yellow jacket may not be sensitive to honeybee. If stung the second time by a honeybee one could not evaluate the effect of "hyposensi-

TABLE 1: Data Related to Stings after "Hyposensitization" Treatments

Patient	Age	Insect Causing Original Symptom	Extract Used for "Hyposensitization"	Year of Treatment	Interval Between Injections	Restung by	Interval Between Last Injection and Sting	Result*(Generalized Symptoms)
					weeks		weeks	
Bur.	38	Yellow jacket	Yellow jacket	3rd	14	Yellow jacket	4	None
Mit.	13	Yellow jacket	Yellow jacket	4th	10	Yellow jacket	6	None
Smi.	40	Yellow jacket	Yellow jacket	3rd	10	Wasp	2	Swelling of palm
Wea.	12	Wasp	Wasp	3rd	10	Wasp	10	None
Pet.	14	Wasp	Wasp	3rd	16	Bumble bee	10	None
Dra.	45	Wasp	Wasp	4th	14	Wasp	4	None
Har.	19	Wasp	Wasp	3rd	10	Wasp	7	None
Sex.	45	Wasp	Wasp	3rd	14	3 Wasps	10	None
Sch.	40	Yellow jacket	Mixed	4th	14	2 Yellow jackets	8	None
Fen.	48	Wasps	Mixed	4th	10	3 Yellow jackets	8	None
Bry.	12	Honeybee	Mixed	2nd	10	Honeybee	5	Hives—face
				3rd	12	Wasp	10	None

Stings During Maintenance Treatment

Eleven of the 20 patients were stung again at some time during the period of maintenance "hyposensitization" therapy. Table 1 shows the results.

Discussion

It appears that certain patients after a course of "hyposensitization" are able to tolerate 5,000 protein nitrogen units of Hymenoptera extract when administered at intervals up to 16 weeks, and probably longer.¹ Whether these patients are protected can be determined only by a sting, preferably in the latter part of the interval between injections. Of the 11 patients restung, 2

tization" to yellow jacket. Therefore, it is important in evaluating the effects of "hyposensitization" to identify the species which stung. In all the above cases the insect was identified, and the patient suffered a less severe reaction than before "hyposensitization" therapy. A third factor is the possibility of cross-protection in some cases.

One can only speculate on the reasons why the patient can tolerate aqueous extract at these prolonged intervals. Does he in the course of 2 to 3 years lose his antibody, thus no longer being allergic? Or does the extract truly desensitize him, using up the antibody which he seems to form more and more slowly? The latter seems the more likely explanation in view of the finding

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Reflections on the Present Status of Cerebral Vascular Insufficiency*

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FROM TIME TO TIME informal discussion has revealed the persistence of much misunderstanding concerning the present status of knowledge regarding various aspects of cerebral vascular disease. For the most part there appears to be widespread but poorly founded optimism concerning the validity of current authoritative opinions and the rapidity with which progress is being made. It is therefore occasionally necessary to reexamine with as much critical objectivity as possible the present status of knowledge in this area.

Numerous procedures have been and are being developed to determine total and regional, as well as minute-to-minute, cerebral blood flow rates. As yet these techniques are not sufficiently sensitive to provide the crucial data regarding prognosis and optimal management of patients with cerebral vascular insufficiency. Consequently many questions can be raised concerning the efficacy of present therapy.

Under normal circumstances the blood flow to the brain is far in excess of that required to support its metabolic needs. Of the approximately 800 c.c. of blood delivered to the brain per minute only about 500 c.c. is needed for adequate oxygen delivery. This finding would indicate that in the event of occlusion of 1 carotid or even of both vertebral arteries, an anatomically intact and hemodynamically effective circle of Willis should permit effective redistribution of the available blood supply, and signs of cerebral ischemia should be obviated. As is well known, one often finds evidence of multiple lesions of aortocranial vessels without manifestations of cerebral infarction or ischemia. Commonly in such cases a normal rate of cerebral blood flow with a significant increase during inhalation of

carbon dioxide is observed. This would imply the operation of various compensatory factors tending to maintain adequacy of cerebral circulation and a favorable prognosis despite large vessel disease. I believe that in such cases the following mechanisms may be functioning:

1. Increase in rate of blood flow through the patent aortocranial vessels. This phenomenon has been demonstrated with the magnetic flow meter and is believed to represent an automatic response to the temporarily increased intracranial blood pressure gradient.

2. Reflex vasodilatation of intracranial arterioles with a reduction of cerebral vascular resistance, resulting in an increase in total cerebral blood flow.

3. Development of intra- and extracranial collateral sources of blood supply.

On the other hand, it must be admitted that cerebral infarction may occur with occlusion of only 1 carotid artery. This not infrequent observation would indicate either that an anomalous vascular arrangement exists in which certain intracranial vessels are dependent upon the patency of a major afferent vessel or that the primary vascular lesion is intracranially located. The hemodynamic factors which may predispose to an unfavorable prognosis may be as follows:

1. Preëxisting marginally-adequate cerebral oxygen delivery.

2. Anomalous circle of Willis with 1 or more incompetent or absent communicating arteries.

3. Absence or failure of development of collateral circulation perhaps due to rapid progression of occlusive disease; or ultimate failure of previously-functioning collateral vessels.

4. Lack of cerebral vasodilating potential due to maximal dilatation, intracerebral arteriosclerosis, or continued high small-vessel tonus.

5. Peripheral circulatory insufficiency or increased blood viscosity.

Since many of these factors cannot be meas-

* Presented in a Panel Discussion on Current Understanding of Cerebrovascular Insufficiency at the Annual Meeting of the American College of Cardiology in Boston, February 19, 1965.

ured it would appear that we do not have firm grounds for evaluating the clinical significance of aortocranial lesions or for establishing criteria for endarterectomy in patients with transient ischemic episodes and aortocranial disease.

Many, if not most, of the agents recommended to promote cerebral vasodilatation fall into the category of general (nonspecific systemic) vasodilators. Experience has demonstrated that these drugs are usually without influence on the rate of cerebral blood flow and oxygen delivery. Any dilatation of peripheral vessels associated with their use may frequently induce significant blood pressure reduction, and an increase in heart rate and cardiac output may not be completely compensatory.

It is also important to point out that in a significant number of patients with cerebral vascular insufficiency even the inhalation of carbon dioxide (the most potent cerebral vasodilator) may have no appreciable influence on cerebral blood flow. The fact that cerebral vascular tone and the rate of cerebral blood flow may be reduced by hyperventilation in such patients suggests that the lack of response to carbon dioxide inhalation may be attributed to maximal dilatation of smaller intracerebral vessels rather than to their rigidity. Certainly in this category of patients pharmacologic agents which have a general vasodilating action cannot be expected to improve cerebral blood supply but may have deleterious effects due to blood-pressure reduction. Even in patients who respond to carbon dioxide inhalation with a significant increase in cerebral blood flow its therapeutic effectiveness has not been satisfactorily demonstrated.

Furthermore, in view of the experimentally-demonstrated maximal dilatation of collateral channels following cerebral vascular occlusion due to lowered pH and oxygen tension, accumulation of acid metabolites and increase in carbon dioxide tension, one could expect that the general vasodilators would at best dilate only the arterioles of nonischemic brain areas.

The etiology of cerebral ischemic episodes has been the subject of much speculation. Cerebral vasospasm, accumulation of fibrin aggregates, and transient hypotension have at one time or another been incriminated. There is recent evidence to question the importance of transient hypotension. Kendell and Marshall¹ have demonstrated that the induction of hypotension in patients subject to transient ischemic episodes does not experimentally reproduce focal ischemic attacks. Our work has also demonstrated that

these subjects can tolerate significant hypotension and reduction of total cerebral blood flow without experiencing focal ischemia. It had previously been observed by us that in patients with a history of transient cerebral ischemic episodes such attacks could not be induced by hyperventilation even though total cerebral blood flow was reduced as much as 50 per cent.

In essence, it is becoming increasingly apparent that there are as yet no convincing basic hemodynamic data to support any of the therapeutic modalities presently being advocated in the treatment of cerebral ischemic episodes. The unpredictable prognosis to a great extent appears to depend upon the hemodynamic effectiveness of the circle of Willis and the potential of intra- and extracranial collateral sources of blood supply, parameters which at the present time defy quantitative measurement.

In order to emphasize the thesis that unpredictability of prognosis renders unreliable the assessment of the various therapeutic regimens presently utilized it may be worthwhile to describe briefly an illustrative case typical of many we have all seen in practice:

Ten years ago, at the age of 64 years, the patient experienced a cerebral infarction in the distribution of the left middle cerebral artery with subsequent clinical recovery, and she was left with only minimal neurologic residua. Two years ago (8 years after the initial episode) she experienced for several days recurrent transient cerebral ischemic attacks, reflecting insufficiency of blood supply to the same brain regions as before. On examination, except for a mild right hemiparesis (the residuum of her initial cerebral infarct), the only significant finding was a loud bruit over the left internal carotid artery. In view of uncertainty as to the value of any of the presently utilized therapeutic regimens it was thought that radiographic demonstration of a vascular lesion would be at best of academic importance. Neither anticoagulants nor vasodilators were employed in treatment. Certainly, in spite of these omissions and perhaps because of restraint of therapeutic enthusiasm, this patient has not only suffered no further neurologic injury but has become asymptomatic and has remained so for the past 2 years.

This not uncommon experience emphasizes the need for estimating the individual patient's capabilities for compensation of cerebral vascular insufficiency without employment of diagnostic and therapeutic modalities of dubious value.

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Pretibial Myxedema

Report of a Case*

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PRETIBIAL MYXEDEMA is associated with hyperthyroidism and almost invariably is accompanied by exophthalmos.¹⁻⁴ This form of myxedema frequently follows thyroidectomy or suppression of excessive thyroid activity by drugs or radiation.³

This paper reports the clinical and histopathologic findings in a patient with the diagnosis of pretibial myxedema. These findings are compared with those of all previous patients with pretibial myxedema on file at the Hospital of the University of Pennsylvania.

Report of Case

A 45-year-old white woman who had a long history of rheumatic heart disease complicated by hyperthyroidism died suddenly in the receiving ward on April 19, 1963. Her first attack of rheumatic fever occurred at the age of 15 (1933), and a second, less severe attack, occurred 3 years later. She remained symptom-free until the age of 31 (1949) when she noted symptoms of dyspnea, swelling of the legs, 10-pound weight loss, hyperhidrosis, and a swelling in her neck. She was admitted to another hospital where the diagnoses of mitral stenosis and thyrotoxic goiter with exophthalmos were made. After an unsuccessful trial on propylthiouracil for 1 year a subtotal thyroidectomy was performed. She was then maintained on propylthiouracil, 200 mg. daily, and on an unspecified dose of digitalis.

In 1952 the patient was seen at the Hospital of the University of Pennsylvania where exophthalmos and cardiac murmurs, strongly suggestive of mitral stenosis and insufficiency, were found. Her basal metabolic rate was plus 31 per cent, and her radioactive iodine uptake was 77 per cent in 24 hours and 64 per cent in 48 hours. The patient was treated with

6 mc. of radioactive iodine. Because of rapid atrial fibrillation and symptoms of congestive heart failure not controllable with digitalis a second administration of 6 mc. of radioactive iodine was given in October, 1952, 9 months after the first dose. The patient's condition remained poor. She was then given 2 more doses of radioactive iodine (figure 1) with hypothyroidism resulting. She was subsequently maintained on 60 to 90 mg. of thyroid and 0.15 mg. of digitoxin daily from 1954 until her death.

Early in 1954 open-heart surgery was performed, and the mitral valve was dilated to admit 2 fingers.

During the last 4 years of her life the patient developed a brawny, nonpitting induration of the skin over both shins. This area was studied by biopsy on March 28, 1962 and diagnosed as pretibial myxedema. Six months later, at the time of her ninth and final hospital admission, no change was noted in her pretibial skin. Her skin elsewhere was described as having a normal texture.

After this last hospital discharge she was lost to follow-up until she was brought to the receiving ward in cardiovascular collapse. She died within an hour of her arrival.

At autopsy marked exophthalmos was seen to be present. The skin over both shins was thickened and brawny with areas of irregular pigmentation, but elsewhere it appeared normal. No remnant of thyroid gland could be found. Examination of the heart showed hypertrophy of the right ventricle, severe mitral stenosis, and moderate aortic valvulitis. Refusion of the previous mitral commissurotomy was evident. The lungs showed severe pulmonary edema and chronic passive congestion. Generalized visceral congestion was noted.

Skin from the pretibial area, from the normal-appearing midabdominal area, and from the abdomen of numerous normal controls, was stained with hematoxylin and eosin, Masson's trichrome, periodic acid-Schiff (PAS), Verhoeff-van Gieson, reticulum, Perls' iron, and alcian blue stains. These sections were also stained with both crystal violet and colloidal iron before and after digestion with bovine testicular hyaluronidase.

All biopsies of patients with pretibial myxedema on file at the Hospital of the University

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of Pennsylvania were reviewed. All the blocks were obtained, the tissues were re-embedded in Paraplast, and new sections were stained with hematoxylin and eosin, Perls' iron, PAS, and colloidal iron stains, the latter before and after digestion with bovine testicular hyaluronidase.

dominal area of the reported patient and of the control patients are summarized in table 1. The abdominal deposition of acid mucopolysaccharide material was present both in the dermis of the pretibial and of the abdominal skin. There was a slight increase in sulfated mucopolysac-

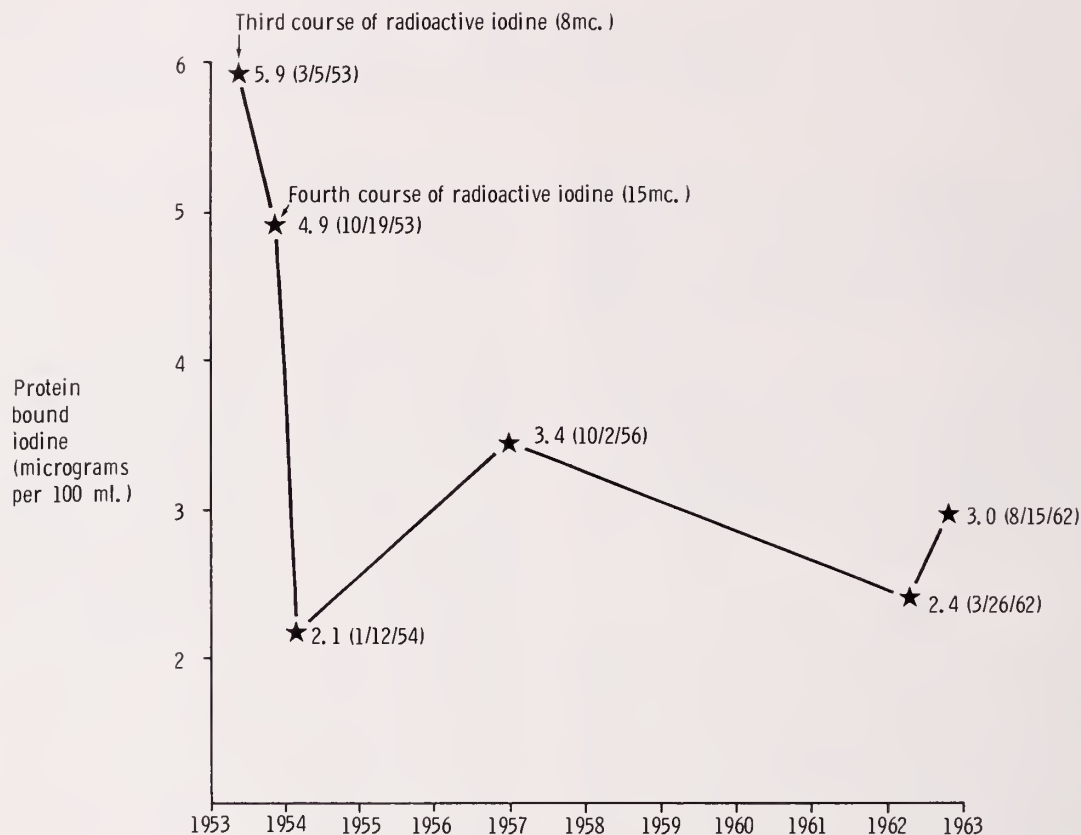


FIG. 1. Graph showing patient's protein-bound iodine levels from time of third course of radioactive iodine treatment until her death.

Results

The hematoxylin and eosin-stained sections of the antemortem-biopsied and of the postmortem-obtained pretibial skin were identical. Both specimens showed irregular atrophy of the epidermis with flattening of the rete pegs and increased deposition of melanin granules in the basal layer (figure 2). There was a basophilic mucinous material deposited throughout the entire dermis except for sparing of a narrow area just under the epidermis. The dermis was about 3 times its normal thickness. The collagen was fragmented and appeared to blend into the mucinous deposits. The dermal changes were also present in the abdominal skin sections, but they were much more striking in the upper third (figure 3).

The results of the histochemical analysis of the skin from the pretibial area and from the ab-

dominal area of the reported patient and of the control patients are summarized in table 1. The abdominal deposition of acid mucopolysaccharide material was present both in the dermis of the pretibial and of the abdominal skin. There was a slight increase in sulfated mucopolysac-

charides in the pretibial skin, but the crystal violet technique was not sensitive enough to show any difference between the patient's abdominal skin and the controls. Hyaluronidase digested almost all colloidal iron-positive material and some of the metachromatic material from the pretibial area. It should be noted that when extensive deposits of hyaluronidase-sensitive material are present routine techniques may not digest all the material. With increased incubation time and/or increased hyaluronidase concentration, all the deposit would probably be digested, as we have shown in random specimens with the heaviest deposits. No colloidal iron-positive material could be demonstrated after digesting the abdominal skin (figure 3) and the controls with hyaluronidase.

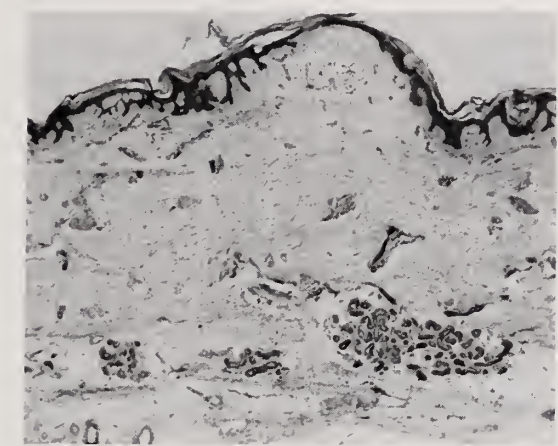


FIG. 2. Pretibial myxedema (pretibial skin) showing basophilic deposit in thickened dermis. Note irregular atrophy of epidermis.

macrophages both around blood vessels and, even more frequently, scattered randomly in the dermis. No hemosiderin was found in the abdominal skin or in the controls.

Considerable numbers of mast cells were present both perivascularly and freely in the dermis, particularly in the middle and lower zones of the pretibial sections. No increase of mast cells was present in the skin from the abdominal area.

The Verhoeff-van Gieson and reticulum stains were not remarkable. The mucinous deposit proved PAS-negative.

The pertinent clinical findings of the reviewed cases plus our own (no. 11) and the results of the histochemical analysis are summarized in table 2. The average age of the patients was 43.3 years (36 to 52 years). There were 7 females, 2 males, and 2 in whom the sex was not stated. Six of the patients were Caucasian, 2 were Negroes, and in 3 the race was not known. All 6 of the patients on whom the information was available had hyperthyroidism and exophthalmos. Three other

patients were known to have had hyperthyroidism, but no information was available pertaining to the presence or absence of exophthalmos. There was no clinical information obtainable for 2 patients. The clinical diagnosis of pretibial myxedema was made in all 11 of the patients prior to biopsy.

The reviewed biopsies all closely resembled the pretibial biopsy from our patient; they differed

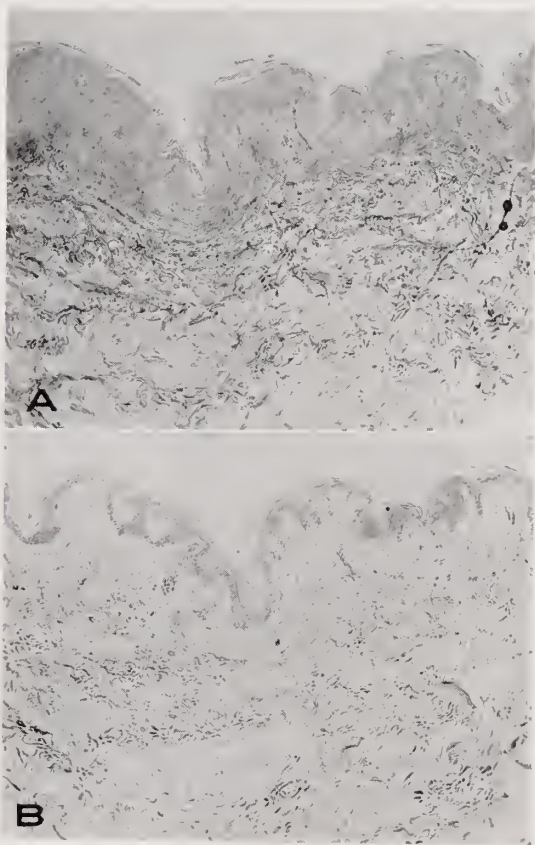


FIG. 3. Pretibial myxedema (abdominal skin). A. Deposit of acid mucopolysaccharide throughout dermis but more marked in upper third. B. Deposit completely removed after digestion with bull testicular hyaluronidase.

TABLE 1: Histochemical Comparison of Skin from Pretibial Area and Abdominal Area of Reported Patient and Normal Controls

	Colloidal Iron	Colloidal Iron Digested*	Crystal Violet	Crystal Violet Digested*	Alcian Blue	Iron	Periodic Acid-Schiff	Mast Cells†
Pretibial skin	5+	1+†	2+	1+	4+	Positive	Negative	3+
Abdominal skin	3+	0	1+	1+	2+	Negative	Negative	0
Normal controls	1+	0	1+	1+	1+	Negative	Negative	0

* Bovine testicular hyaluronidase; 0 denotes complete digestion.
† See text.
‡ Grading based on 0 as normal.

only in degree of involvement. The deposit was uniformly PAS-negative and colloidal iron-positive. The colloidal iron-positive material largely disappeared after digestion with hyaluronidase.

In 5 of the 10 cases the iron stain demonstrated hemosiderin within macrophages in all levels of the dermis but most frequently scattered randomly throughout the dermis rather than around blood vessels. The presence of hemosiderin could not be correlated with the severity of the lesion.

myxedema (increased concentration of acid mucopolysaccharides) in biopsies from the clinically-involved pretibial skin and from the clinically-uninvolved skin of the upper leg and deltoid area of 6 patients. All had exophthalmos and were euthyroid at the time the skin biopsy was made. Watson and Pearse's chemical analysis⁶ showed a marked increase in the concentration of both hyaluronic acid and chondroitin-sulfuric acid in the involved skin area in patients with pretibial myxedema. There was, however, a relatively

TABLE 2: Summary of Patient's Clinical Data and Results of Histochemical Analysis of Reviewed Cases

Case No.	Age	Sex	Race	Clinical Diagnosis*	Exophthalmos	Pertinent Clinical Facts	Colloidal Iron	Colloidal Iron Digested†	Iron
1	52	F	N	Hyperthyroidism	Marked	Thyroidectomy 8-10 yrs. prior to admission (PTA)	3+	1+	Negative
2	51	M	C	Hyperthyroidism	?		3+	1+	Positive
3	?	?	?	?	?		4+	0	Negative
4	36	M	C	Hyperthyroidism	Marked		4+	2+	Positive
5	39	F	?	Hyperthyroidism	Marked	Subtotal thyroidectomy 3 yrs. PTA and 2 yrs. PTA	4+	1+	Negative
6	45	F	C	Hyperthyroidism	Marked	Untreated for hyperthyroidism	3+	1+	Negative
7	40	F	C	Hyperthyroidism	?	Thyroidectomy 3 yrs. PTA	3+	0	Positive
8	43	F	C	Hyperthyroidism	Marked		4+	0	Negative
9	?	?	?	?	?		3+	1+	Positive
10	39	F	N	Hyperthyroidism	?	Massive doses of propylthiouracil	3+	2+	Positive
11 Reported	45	F	C	Hyperthyroidism, rheumatic heart disease	Marked	Subtotal thyroidectomy 1950; I ¹³¹ treatment†	5+	1+	Positive

* The clinical diagnosis of pretibial myxedema was made on all patients prior to biopsy.
† See text.
‡ Bovine testicular hyaluronidase (0 denotes complete digestion); all cases showed a basophilic mucinous dermal deposit in hematoxylin and eosin-stained sections; staining with the periodic acid-Schiff reaction gave negative results in all cases.

Discussion

The histochemical study demonstrates that our patient had increased concentration of acid mucopolysaccharides in the skin from both the clinically-involved pretibial area and the clinically-uninvolved abdominal area. The sections differed only in the degree of involvement and in the distribution of the deposit.

The association of hyperthyroidism, malignant exophthalmos, and pretibial myxedema is generally recognized.¹⁻⁴ The realization that pretibial myxedema may possibly be a generalized disorder of acid mucopolysaccharide metabolism is, however, very recent.^{2, 5} Beierwaltes² showed chemical and histochemical findings of

much greater increase in the concentration of hyaluronic acid than of chondroitin-sulfuric acid.

Our histochemical results as seen in table 1, therefore, agree with the chemical analytic results of Beierwaltes² and of Watson and Pearse.⁶

The presence of considerable hemosiderin deposition in the pretibial biopsy but not in the abdominal biopsy offered a clue to the discrepancy in clinical findings. In reviewing all previous biopsies from patients with pretibial myxedema this finding was present in 5 of the 10 cases, a much higher incidence than is expected.⁷ Since the finding was not present in all of the patients, however, and since the group is quite small, the significance, if any, of the hemosiderin deposition is not clear.

Asboe-Hansen⁸ found a considerable number of mast cells in pretibial myxedema in those areas in which metachromatic staining was present. Wodniansky⁹ showed that the number of mast cells has not been found to be increased in all cases of pretibial myxedema. The observation of increased numbers of mast cells in the pretibial skin in our reported patient is an interesting but poorly understood phenomenon.

Summary

A patient with pretibial myxedema has been shown to have increased acid mucopolysaccharide deposition in the dermis of the pretibial skin and of the abdominal skin. Deposition of acid mucopolysaccharides in areas of the body other than the pretibial skin of patients with pretibial myxedema has not been generally recognized.

All previous skin biopsies from patients with pretibial myxedema have been reviewed. The significance of hemosiderin deposition within macrophages in the dermis and the observation of increased numbers of dermal mast cells has been discussed.

I am indebted to Drs. A. J. Rawson, H. T. Enterline, and G. W. Evans for help and advice in carrying out this study and in preparation of the manuscript, and to Mrs. Dezna C. Sheehan and her staff for technical assistance.

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Acute Fluid Sequestration in Posteraniotomy Shock—Martins et al

(Continued from page 312)

tion of fluid into the gastrointestinal tract in the genesis of shock following brain surgery.

Hypovolemic shock caused by rapid loss of isotonic fluid into the gastrointestinal tract is suspected when the hematocrit rises abruptly while the serum sodium concentration remains stable or decreases in a patient with a silent abdomen. Treatment consists of adequate plasma and saline replacements in order to restore vital signs and urine output to normal, together with continuous decompressive gastric suctioning.

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Cervical Spine in Rheumatoid Arthritis—Stanbro and Merlo

(Continued from page 314)

Summary

Classical rheumatoid arthritis not infrequently involves the cervical spine. While sharing certain features with ankylosing spondylitis, rheumatoid arthritis presents distinctive roentgen findings of its own. Failure to appreciate these distinctive findings may lead to misinterpretation of their diagnostic significance or to failure in their radiographic demonstration. Subluxation of the atlantoaxial joint, in particular, can be overlooked in rheumatoid arthritis with serious consequence to the patient.

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Bartholin-gland Carcinoma

Report of a Case Requiring Abdominoperineal Resection*

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THE RARITY of Bartholin-gland carcinoma, especially when it requires a 3-stage surgical attack including abdominoperineal resection, is of sufficient interest to merit reporting.

Although an infrequent gynecologic disorder, carcinoma of Bartholin's gland seems to be increasing in frequency.^{1, 2} This increase may be more apparent than real. Three reasons given to account for this are more precise pathologic diagnosis, an increasing tendency for physicians to report cases, and perhaps better patient education.

Crossen³ gives the incidence as 2 to 3 per cent of all vulvar carcinomas. Cancer of the vulva accounts for 3 to 5 per cent of all genital carcinomas. Thus, 1 out of every 1,000 female genital carcinomas is located in the Bartholin gland. The lesion is encountered largely by practitioners who perform operations for what they consider a benign condition, so that only a few of the actual number are even reported.

This condition is not as rare as the paucity of cases in the literature would seem to indicate. The first case was reported in 1864 by Klob.⁴

Two noteworthy reviews of this subject have been published in the past decade. Wharton and Everett⁵ brought the subject to light in their 1951 monograph. They collected 104 cases and added 4 cases of their own from the Johns Hopkins registry. Masterson and Goss⁶ in 1955 again summarized the literature and found 116 cases. To this they added their case of an 83-year-old woman who successfully underwent radical surgery and was alive and well 3 years later. O'Neill⁷ has recently raised the total to 125, and Barclay to 152.⁸

In the interim 2 to 3 case reports have been reported in the English literature each year. The most recent reports⁹⁻¹³ have dealt with the adenoid cystic carcinoma. Each of these reports has emphasized the insidious and frequently lethal course of this particular tumor despite its frequent benign appearance. One of the adenoid cystic tumors was discovered during pregnancy.

The diagnosis of a Bartholin-gland carcinoma can be difficult. Honan¹⁴ has devised 4 diagnostic criteria. These are (1) typical vulvar location, (2) position deep in the labia, (3) connection with the duct of the gland, and (4) presence of intact gland tissue.

In the early stages there is little to differentiate cancer from a chronic infection or from an adenofibroma. As the lesion grows pruritus appears, sometimes pain, and occasionally infection. When the latter occurs the tumor is usually drained surgically under the mistaken impression that the pathologic process is an abscess.¹⁵

Diagnosis in the advanced lesions is easy. In the early phases when a nontender lump is discovered in a patient over 40 years it should be regarded as serious and excisional biopsy performed.¹⁶ The majority of cases occur in the 40-60 age group.¹⁷

Symptoms are unreliable. In the early lesion they are nonexistent; when the late lesions have symptoms identical with an abscess it is important to be aware of the possibility of a malignant lesion.¹⁸

Histologically the acini of Bartholin's gland are lined with cuboidal cells, and the superficial ducts near the surface are lined with stratified squamous epithelium. The epithelium becomes transitional as the duct nears the gland. Thus it is possible for different types of carcinoma to arise in Bartholin's gland.

Two types of neoplasm are evident, adenomas

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and carcinomas. Grossly the carcinomas have a poorly demarcated outline and are either granular and friable or sticky and mucinous on sectioning. Microscopically either an epidermoid carcinoma of duct origin or a solid type of mucinous adenocarcinoma is seen, depending on whether the ducts of the acini have undergone neoplastic change.¹⁵ Sometimes the tumor has a transitional appearance similar to that of a bladder carcinoma.

Table 1 shows the cell types in the 109 cases in Wharton's series. The high incidence of squa-

volves the anus, and when there is a reasonable chance of a cure. Unlike carcinoma of the vulva, malignant disease of Bartholin's gland is unicentric in origin. If the operation is radical enough we should be able to cure more patients with cancer of Bartholin's gland than with carcinoma of the vulva. If the lesion proves to be a sarcoma the radical approach still applies.

The prognosis of this disease is poor. It seems to depend on the size of the lesion rather than on the extent of metastases to lymph nodes. Pathologic grading of the tumor is also considered of importance in prognosis. Masterson⁶ reported a survival rate of less than 10 per cent.

It would appear that the poor prognosis after therapy for cancer in this gland is due to failure to recognize the true nature of the growth and to inadequate attempts to deal with it. This reflects a 15-month patient delay and a 4.9-month physician delay because of a false sense of security.

The prognosis can be considered favorable when there is absence of tissue permeation outside the gland itself and when there is no lymph-node involvement.

Report of Case

L. C., a 40-year-old Negress, gravida III, Para 3, was hospitalized because of a painless left lower labial mass measuring 4 by 4 by 3 cm. Exeisional biopsy disclosed a well-differentiated adenocarcinoma of Bartholin's gland with extension toward the rectum.

In view of the patient's poor health, cirrhosis and a nutritional anemia, a 2-stage procedure was decided upon: radical vulvectomy with partial vaginectomy, followed by bilateral groin dissection.

Pathologic examination of the vulvectomy specimen revealed extension almost to the rectal wall. This local spread necessitated a third procedure, an abdominoperineal resection, which was performed 6 weeks following the groin dissection.

The patient withstood all procedures satisfactorily. All lymph nodes were negative except for 1 superficial left inguinal node. She is alive and well 4 years later.

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TABLE 1: Types of Tumors¹²

Type	Per cent
Adenocarcinoma	46.8
Squamous carcinoma	35.8
Carcinoma, including	7.3
Atypical	
Adenoepidermoid	
Chaneroid	
Parvicellular	
Medullary	
Mucoid	
Cystosarcoma	
Undifferentiated	2.7
Sarcoma	3.7
Unknown	3.7
	100.00

mous-cell carcinoma (35.8 per cent) has been attributed to squamous metaplasia occurring in response to chronic inflammation, especially when the tumor arises deep in the vulva.

Therapy is primarily surgical, consisting of radical vulvectomy with a meticulous en bloc dissection of the superficial and deep inguinal and femoral nodes with a wide surgical margin of normal tissue. If the lesion involves the vagina and the patient is a good surgical risk we believe that removal of the deep pelvic nodes is indicated. This operation is usually performed in 1 stage but may be done in 2 stages.

Individualization and selection of treatment are necessary in patients who are poor surgical risks or have far-advanced disease. Palliative therapy, as may sometimes be achieved with supervoltage X-rays, the use of radium needles, electrocauterization, local excision of the tumor, or any combination of these methods may be performed in the best interests of the patient, sometimes with remarkably good results.

Exenterative procedures, usually done in stages, may be performed when the disease has spread up the vagina or into the bladder, or in-

William Shakespeare's Knowledge of Medicine

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THE YEAR 1964 marked the quattrocentennial of the birth of William Shakespeare. The entire world, especially the communities of Anglo-Saxon culture, honored this man's birth year with many demonstrations. Much was written and rewritten about him, and pilgrimages to Stratford-on-Avon attracted thousands of tourists.

No other single person, including the intellectual giants of ancient Greece nor the scholars and artists of the Renaissance, has made such magnificent and enduring contributions to the culture of the civilized world. Nor had anyone before him ever equaled his vast knowledge of the many facets of human behavior. Indeed, he was the *avant-garde* of the Elizabethan era in his knowledgeableness of law, physiology, drama and poetry, theology, mathematics and astronomy.

In December, 1932 I was privileged to have had published in the MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA an article entitled, "Some Notes on William Shakespeare's Knowledge of Medicine" (vol. 1, p. 317). The following is a slightly revised reprinting of that article, submitted as a small part of the celebration of the birthday of The Immortal Bard.

Authoritative medical historians concede William Harvey (1578-1657), the Englishman who studied at Padua, the honor of having been the first to discover the circulation of the blood in the human body. Harvey announced his discovery in 1628, although he states in his "*Exercitatio-Anatomica de Motu Cordia et Sanguinis*" that he had for 9 years been demonstrating the subject in his lectures at the College of Physicians in London. If these statements are allowed, it would carry the first utterance of his discovery as far back as 1619. Sixteen years before that time, however, the play of *Hamlet* first appeared in print. In Act I, Scene v, we find:

... Holds such an enmity with blood of man
That swift as quicksilver it courses through
The natural gates and alleys of the body;

And with a sudden vigor it doth posset (coagulate)
And eurd, like eager (acid) droppings into milk,
The thin and wholesome blood; ...

This is indeed in anticipation of Harvey; and again one reads in *Julius Caesar* (Act II, Sc. i), published for the first time in 1623:

As dear to me as the ruddy drops
That visit my sad heart.

Two lines from the speech of Menenius in *Coriolanus* give added confirmation of Shakespeare's knowledge of the circulation of the blood:

I send it through the rivers of your blood,
Even to the court, the heart; to the seat of the
brain; ...

No claim is made that Shakespeare was the first to realize that blood flowed. It is well known that Hippocrates, Columbus and Servetus had touched on the subject in their observations and teachings, but it is most illuminating that before an experimental study of the circulation of the blood was given widespread recognition, Shakespeare should have definitely asserted himself on that score.

Until John R. Young in 1803 and William Beaumont in 1833 demonstrated the actual physiology and chemistry of digestion, the stomach was regarded as a "mill, a fermenting vat or a stewpan." Physicians referred to digestion with vague theories of "innate heat" and "vital spirits," and little was actually known of the mechanism by which foods were reduced to assimilable units and utilized in various ways by the body. Shakespeare knew little if any more than his contemporaries or the men of the pre-Beaumont era regarding this vastly important subject, but one cannot help but be struck by the conversation in *Coriolanus* (Act I, Sc. i) between Menenius and the Second Citizen, quoted in part below. Here, with "belly" meaning gastrointestinal tract, one finds a startling, significant statement regarding digestion and

nutrition. One must admit that the master strongly suspected the intestines to have the function they do in these bodily processes, and the blood to be the distributing agent.

Menenius: There was a time when all the body's members

Rebell'd against the belly, thus accus'd it:
That only like a gulf did it remain
I' the midst o' the body, idle and unactive,
Still cupboarding the viand, never bearing
Like labour with the rest, where th' other instru-
ments

Did see and hear, devise, instruct, walk, feel,
And, mutually participate, did minister
Unto the appetite and affection common
Of the whole body. The belly answer'd,—

First Citizen: Well, sir, what answer made the belly?

* * * * *

Menenius: Note me this, good fellow;
Your most grave belly was deliberate,
Not rash like his accusers, and thus answer'd:
"True it is, my incorporate friends," quoth he,
"That I receive the general food at first
Which you do live upon, and fit it is,
Because I am the store-house, and the shop
Of the whole body; but, if you do remember,
I send it through the rivers of your blood,
Even to the court, the heart; to the seat of the
brain;

And, through the cranks and offices of man,
The strongest nerves and small inferior veins
From me receive that natural competency
Whereby they live; and though that all at once
You, my good friends,"—this says the belly,—mark
me,—

* * * * *

"Though all at once cannot
See what I do deliver out to each,
Yet can I make my audit up, that all
From me do back receive the flour of all,
And leave me but the bran."

Galen (131–201 A.D.), one of the greatest of Greek physicians after Hippocrates, was the founder of experimental physiology. At the close of the so-called ancient period in the history of medicine, he had contributed scores of volumes upon pathology, therapeutics and physiology. Remarkable as these works were in the slow progress of medicine at that time, they were filled with many inaccuracies. They were not based upon the dissection of humans but of swine and apes, and his physiologic speculations about his findings were spoiled by his mania of teleology. In spite of this, however, Galen was the final authority of his time and after his death as well. European medicine made very little progress for nearly 14 centuries, and it was

not until "*De Fabrica Humani Corporis*" (1534) was published by Andreas Vesalius (1514–1564) that rigid Galenical traditions and anatomic views were shattered.

The best feature of Galen's anatomic and physiologic work was in the field of neurology, and much that he described was accurate. Shakespeare was apparently familiar with that work as well as with later discoveries of the physiology of the brain. In *Twelfth Night* (Act I, Sc. v), for instance, reference is made to the 'pia mater.' The Clown declares to Olivia, "... One of thy kin has a most weak pia mater." It was a belief then, and it is known today, that through the pia mater, the innermost and most vascular covering of the brain and the spinal cord, these latter neural tissues are nourished. Hence, to have a weak pia mater was to have a weak intellect.

There was an ancient theory that there were only 3 ventricles in the brain; in the first, one had the origin of the "five wits" or special senses; in the second, thought; and in the third, memory. In *Love's Labour Lost* (Act IV, Sc. ii) we read:

Holofernes: This is a gift that I have, simple, simple; a foolish, extravagant spirit, full of forms, figures, shapes, objects, ideas, apprehensions, motions, revolutions; these are begot in the ventricles of memory, nourished in the womb of pia mater, and delivered upon the mellowing of occasion.

Shakespeare apparently had opinions regarding the abuse of alcohol and overindulgence, and he has Adam deliver a short temperance lecture in *As You Like It* (Act II, Sc. ii):

Adam: Though I look old, yet I am strong and lusty:
For in my youth I never did apply
Hot and rebellious liquor in my blood,
Nor did not with unbashful forehead woo
The means of weakness and debility;
Therefore my age is as a lusty winter,
Frosty, but kindly.

The student of psychology or medicine who is familiar with the eccentricities of man, historically and clinically, will note with interest Shakespeare's reference in the *Merchant of Venice* (Act IV, Sc. i):

Shylock: Some men are there love not a gaping pig:
Some, that are mad, if they behold a cat;
And others when the bagpipe sings i' the nose,
Cannot contain their urine; for affection,
Master of the passions, sways it to a mood
Or what it likes or loathes....
And there is no firm reason to be render'd

Why he cannot abide a gaping pig,
 Why he a harmless necessary cat,
 Why he a swollen bagpipe, but of force
 Must yield to such inevitable shame,
 As to offend, himself being offended.

Of special interest to me are the following excerpts and passages which have some bearing upon the field of obstetrics.

In Scene ii, Act V, of *Love's Labour Lost* we find a reference to "quickening" or the movements of the fetus in utero. Here Costard says: "Faith, unless you play the honest Trojan, the poor wench is cast away: she's quick; the child brags in her belly already; 'tis yours."

One does not find a reference to belief in prenatal influences, but the following from the Third Part of *Henry VI* (Act IV, Sc. iv) is a conception that the emotions may be powerful enough to cause the death of an unborn child:

Queen Elizabeth: And I the rather wean me from despair

For the love of Edward's offspring in my womb.
 This is it that makes me bridle passion,
 And bear with mildness my misfortune's cross;
 Ay, ay, for this I draw in many a tear,
 And stop the rising of blood-sucking sighs,
 Lest with my sighs or tears I blast or drown
 King Edward's fruit, true heir to the English crown.

One clearly reads a reference to the sufferings of childbirth and the kindness of men during this time, in the following lines from *King Henry VIII* (Act V, Sc. i):

King Henry: Now, Lovell, from the Queen what is the news?

Lovell: I could not personally deliver to her what you commanded me; but by her woman I sent your message, who returned her thanks in the great'st humbleness, and desired your highness Most heartily pray for her.

King Henry: What say'st thou, ha?

To pray for her? What, is she crying out?

Lovell: So said her woman, and that her sufferance made

Almost each pang a death.

King Henry: Alas, good lady!

Suffolk: God safely quit her of her burthen and
 With gentle travail, to the gladding of
 Your Highness with an heir.

And from Pericles (Act III, Sc. i):

Pericles: Lucina, O

Divinest patroness, and midwife gentle
 To those that cry at night, convey thy deity
 Aboard our dancing boat; make swift the pangs
 Of my Queen's travail!

(It may be remembered that Pericles was accompanied by his queen in a voyage during which a most severe storm overtook them. Through fear and the effect of the "dancing boat" the queen, who was with child, was prematurely delivered of a baby girl. She expired and was consigned to the deep by Pericles to appease the entreaties of his superstitious mariners.)

Several passages which well describe fetal malformations run through these works. For instance, in *King Richard III* (Act I, Sc. i). Richard, Duke of Gloucester, says:

I, that am curtail'd of this fair proportion,
 Cheated of feature by dissenting nature,
 Deform'd, unfinish'd, sent before my time
 Into this breathing world, scarce half made up,
 And that so lamely and unfashionable
 That dogs bark at me, as I halt by them. . . .

In the Third Part of *King Henry VI* (Act III, Sc. ii), Gloucester says:

Why, love forswore me in my mother's womb;
 And, for I should not deal in her soft laws,
 She did corrupt frail nature with some bribe
 To shrink mine arm up like a wither'd shrub;
 To make an envious mountain on my back,
 Where sits deformity to mock my body;
 To shape my legs of an unequal size;
 To disproportion me in every part,
 Like to a chaos, or an unlick'd bear-whelp
 That carries no impression like the dam.

It is interesting to note Shakespeare's reference to the birth of children whose teeth have already erupted (Third Part, *King Henry VI*, Act V, Sc. vi):

King Henry: Thy mother felt more than a mother's pain,
 And yet brought forth less than a mother's hope,
 To wit, an indigested and deformed hump,
 Not like the fruit of such a goodly tree.
 Teeth hadst thou in thy head when thou wast born,
 To signify thou camest to bite the world; . . .

In the same scene Gloucester himself says:

For I have often heard my mother say
 I came into the world with my legs forward.
 Had I not reason, think ye, to make haste,
 And seek their ruin that usurp'd our right?
 The midwife wonder'd; and the women cried,
 "O, Jesus bless us, he is born with teeth!"

As to cesarean section we learn that:

. . . Maeduff was from his mother's womb
 Untimely ripp'd.

And from *Cymbeline* (Act V, Sc. iv):

Mother: Lucina lent me not her aid,
But took me in my throes;
That from me was Posthumus ripp'd,
Came crying 'mongst his foes,
A thing of pity!

A nice distinction is brought out in *King John* (Act I, Sc. i) between illegitimacy and premature birth, as one will see in:

Robert: Upon his death-bed he by will bequeath'd
His lands to me, and took it on his death
That this, my mother's son, was none of his;
And if it were, he came into the world
Full fourteen weeks before the course of time.

Shakespeare was mentally the master of all time. It is incredible that one human being could possibly have mastered in a single lifetime such a wealth of information; have produced such eternal masterpieces; have necessarily associated with so many classes and types of people. He is said to have studied law, and he was indeed a close student of theology, and an academician. His references to the brain, to the circulation of the blood, and to the physiologic functions of digestion and assimilation are amply sufficient to establish also his right to membership in the Guild of Medicine.

The lines from Shakespeare's plays are taken from the "Complete Works of William Shakespeare; Cambridge Text." Boston: Dana Estes & Co., 1900, 10 volumes.

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Hyposensitization of Hymenoptera Patients —Brown

(Continued from page 316)

that precipitins gradually disappear from the serum of many of these patients after or during the course of "hyposensitization".² Perhaps the patients who can tolerate long intervals between injections are the ones whose titer of antibodies, for one reason or another, is decreasing. Perhaps several types of antibody are involved in the system, and this is only a partial picture of immunological events. These and many more questions remain to be answered.

When to discontinue "hyposensitization"

treatments is a practical problem to doctor and patient alike. Patients who find it burdensome to report at monthly intervals do not hesitate to report at longer intervals for treatment.

Summary

Twenty Hymenoptera patients tolerated "hyposensitizing" injections of 5,000 protein nitrogen units of aqueous extract at gradually increasing intervals up to 16 weeks. No constitutional reactions occurred.

Eleven of the 20 were restung. Nine of the 11 experienced only a local reaction. Two had definite symptoms—1, stung on the scalp, suffered a local swelling of the palm; the other, stung on the lip, developed hives about the head and neck. Compared with the original stings these reactions were relatively minor.

Possible reasons for tolerance of aqueous extract at these long intervals are discussed.

Prolonging the interval between "hyposensitization" treatments is of practical value to both patient and physician.

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LOMOTIL *Pharmacologic Activity*

The significant pharmacologic actions of Lomotil are summarized as follows:

Evidence indicates that Lomotil acts directly on the intestinal musculature to inhibit excess peristalsis.

Lomotil is not known to inhibit nonpropulsive intestinal movements.

Roentgenograms demonstrate that this activity occurs within two hours after oral administration and persists for at least six hours.

Comparative studies in the rat show Lomotil to be more effective in inhibiting fecal excretion than either codeine or morphine.

Analgesic, anticholinergic, mydriatic and gastric secretory effects have not been significant.

Reduction of propulsive motility with Lomotil relieves spasm and cramping, allows physiologic absorption of fluid and reduces frequency of evacuations to provide prompt, symptomatic control of virtually all diarrheas.

LOMOTIL[®]

Each tablet and each 5 cc. of liquid contains:

diphenoxylate hydrochloride 2.5 mg.

(Warning: May be habit forming)

atropine sulfate 0.025 mg.

tablets • liquid

slows propulsion



relieves distress



stops diarrhea



Precautions: Lomotil is an exempt narcotic preparation of very low addictive potential: more than three million prescriptions have now been written for Lomotil. Recommended dosages should not be exceeded. Lomotil should be used with caution in patients with impaired liver function and in patients taking addicting drugs or barbiturates.

Side Effects: Side effects are relatively uncommon but among those reported are gastrointestinal irritation, sedation, dizziness, cutaneous manifestations, restlessness and insomnia.

Dosage: For full therapeutic effect—Rx full therapeutic dosage. The recommended initial daily dosages, *given in divided doses*, until diarrhea is controlled, are:

Children:

- 3 to 6 months—3 mg. (½ tsp.* t.i.d.)
- 6 to 12 months—4 mg. (½ tsp. q.i.d.)
- 1 to 2 years—5 mg. (½ tsp. 5 times daily)
- 2 to 5 years—6 mg. (1 tsp. t.i.d.)
- 5 to 8 years—8 mg. (1 tsp. q.i.d.)
- 8 to 12 years—10 mg. (1 tsp. 5 times daily)

Adults:

- 20 mg. (2 tsp. 5 times daily or
- 2 tablets 4 times daily)

**Based on 4 cc. per teaspoonful.*

Maintenance dosage may be as low as one fourth the therapeutic dose.

Lomotil is a brand of diphenoxylate hydrochloride with atropine sulfate; the subtherapeutic amount of atropine is added to discourage deliberate overdosage.

SEARLE

*Research in the
Service of Medicine*



PRESIDENT'S PAGE

A PRAISEWORTHY JOURNAL



TWO RECENT LETTERS concerning our own *MEDICAL ANNALS* stimulated this month's message. One came to the Editorial Offices from a sales representative of the State Medical Journal Advertising Bureau, and read in part: "I've found that your journal is especially well received by our prospects and advertisers when I make a sales call. . . . The best promotion piece we can leave after a sales call is a copy of a handsome, well-edited journal." The other, from the Chief Librarian at the Memorial Sloan-Kettering Cancer Center in New York City, began: "Because of the great amount of material on cancer which appears in the *MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA*, we feel that it is imperative that this journal be received in our Library."

It is very difficult for an editorial staff to "blow its own horn" but this "page" can state that a full orchestral concert of praise is overdue and deserved. The *ANNALS* is the successor to the Medical Society's first publication, the *National Medical Journal*, issued in April, 1870. It has survived many vicissitudes, particularly of the past 4 years when large pharmaceutical houses drastically reduced their advertising budgets in order to devote more funds to legislative activities in their own behalf as a result of the Kefauver investigations. While this trend seems now to be reversing itself, State Medical Society journals have not regained their former share because of the supposedly greater advertising value of national medical publications. However, for the latter this advantage may be a 2-edged sword, because readability of some of our national journals decreases as the space allocated to promotional advertising increases. Some are frustratingly unreadable because of excessive interspersal of advertisements.

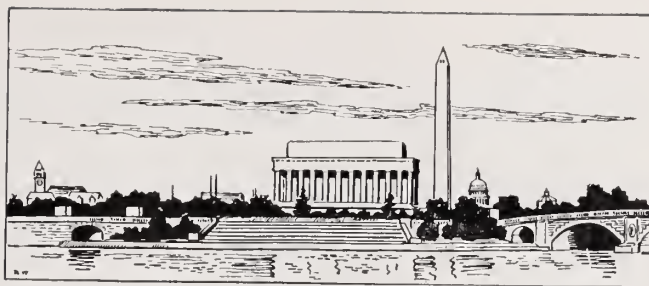
The "paradox of pharmaceutical advertising" was well stated in an editorial under that title in one of the state medical journals*: "It is ironic that the sources of much of the material published by these profit-inspired publications are being endangered by these reductions in advertising volume in the scientific journals."

Specialty journals continue to exist and thrive because of a compulsive need for one to keep up in his own field and because most are of superb quality. A state journal must not only present scientific material of interest to all practitioners but must devote space to expressing the views and policies of the Society it represents. This dual purpose compounds its difficulties.

There are 39 state journals in existence. Ours is outstanding. Dr. Wallace M. Yater, Editor for 33 years, Miss A. Louise Eckburg, Assistant Editor for 17 years, and our Editorial Board and Consulting Editors are responsible for its success. Also, Mr. Theodore Wiprud and now Mr. George W. Cooley, our Executive Secretaries, have nobly and diligently budgeted and pared expenses without losing quality. The special issues of the *ANNALS* arranged by Dr. Yater have been well received not only by our community but nationally. The Medical Society may well be proud of the *ANNALS* and the people who have contributed to its success.

* J. Med. Ass. Georgia, August, 1964.

Paul R. Wilner



EDITORIALS

Physicians for Automotive Safety and Its Objectives

PHYSICIANS FOR AUTOMOTIVE SAFETY is a new organization of the American medical profession specifically created and motivated to channel the energies and experience of physicians in meeting the challenge of the contemporary man-made epidemic of automobile accidents.

On April 7, 30 physicians of PAS protested current defective automobile design before the 1965 International Automobile Show at the New York Coliseum. Since this demonstration, the response from the public and our fellow physicians throughout the country reflects sentiment that our action was long overdue.

The annual fatality and injury toll on United States highways has registered sharp increases every year since 1962, with last year amounting to 48,000 dead and over 5 million injured, a 17 per cent increase over the past 2 years. The history of medicine provides many examples of direct intervention by the physician in the control of a public health hazard.

Despite past intensive programs directed at control of the environment (the highway) and the host (man), little attention has been directed toward preventive countermeasures for the specific agent (the automobile). Defective automobile design is responsible for much of the epidemic injury, disfigurements, and disabilities.

There is abundant evidence that the automobile manufacturers are producing vehicles that are nowhere near as safe as they should be. In dozens of vehicle designs and features the fundamental principle of safety engineering is being violated, namely, to anticipate every type of accident which may occur because of machine or human failure and then establish safeguards to eliminate the hazards or minimize the injury when failure occurs.

Safety does sell and will sell even more with public awareness. The PAS predicts that, when finally the industry brings its full competitive and engineering skills to bear, there will be unprecedented expansion of industry production and sales. Nevertheless, the measures for passenger protection should be so incorporated in the vehicle that no optional decision by the consumer is required.

Medical school curricula should include courses on automotive safety because education of the physician starts here.

Government regulation has protected the public welfare in such industries as food and drugs for years. The airlines and railroads have had Government supervision with obvious safeguards for safety. The automobile accounts for 90 per cent of transportation accidents and can no longer be excluded.

We are not engineers and do not presume to solve engineering problems for the automobile industry. A list of many of the simple reforms needed within the automobile, nevertheless, is necessary to further public awareness of prime defects. They are:

1. Padded head rests to prevent whiplash injuries to passengers in all seats.
2. Securely fastened seats and seat cushions to restrain driver and passenger in a 30 mph. collision against a 30 G deceleration rate.
3. Position locks for movable front seat in the 2-door model to prevent forward motion of seat-back in crash.
4. Rear windshield wipers and defrosters.
5. Effective energy-absorbing padding over frequent impact areas: visor, dash, heater area, roof.
6. Recessing or removal of all projecting knobs or instrument controls to prevent dangerous impact.
7. Door locks with recessed handles which cannot be accidentally opened by children or impact.

Opinions expressed in contributions to the Editorial Section are those of the writers and do not necessarily reflect the views of the Medical Society of the District of Columbia

8. Strengthened wall between trunk and rear seat to prevent trunk contents from intrusion into passenger compartment in a crash.

9. Shape-coded instrument knobs and standardization of shift lever patterns.

10. Fail-safe braking system involving a separate, independent braking system for front and rear wheels.

11. Exhaust control to minimize air pollution.

12. A reduced-diameter deep-dish steering wheel, with appropriate energy-absorbing design attached to collapsible steering shaft which will protect the driver in a crash. The present General Services Administration standards are inadequate.

13. Exhaust pipe position to prevent carbon monoxide fumes from being drawn into the car. There should also be a carbon monoxide detector and air exhaust and intake near top of car to prevent carbon monoxide accumulation.

14. Smooth wrap-around bumpers with energy-absorbing padding and recoil to minimize the forces of deceleration.

15. Restraining lap harnesses on rear seats and combined shoulder and lap harnesses for the front seat to protect against a 5,000 lb. blow.

16. Unit body construction with high energy absorption factor test affording passengers maximum protection from injury in a crash.

17. Automatic fire control system utilizing carbon dioxide.

18. Roll-over bars for greater head protection in all cars, but especially the so-called "hard-top" and convertible models.

19. Improved windshield structure to afford greater protection to impact by passenger's head.

20. Standardization of tire design, manufacture and sales to provide maximum traction and durability.

All of the previous resolutions of the American Medical Association and the American College of Surgeons asking that the industry make a safer car have been almost completely ignored. There will be no conflict with the regular medical organization activities on automotive safety, and PAS will cooperate to reinforce the mutual objective. As a smaller and more flexible organization it will direct programs specifically to effect occupant protection in motor vehicles.

Physicians for Automotive Safety represents an attempt at organization of the practicing medical profession to cope with a known mechanical epidemiologic agent. The nature of the present epidemic clearly justifies this approach. Hopefully, physicians from every section of the country will join to give meaningful influence for this new medical group.

SEYMOUR CHARLES, M.D.
*President, Physicians for
Automotive Safety*

172 Lyons Avenue, Newark, New Jersey.

EDITOR'S NOTE: Membership inquiries and suggestions for future action should be directed to Dr. Arnold Constad, Secretary-Treasurer, 527 Morris Avenue, Springfield, New Jersey. Basic membership fee is \$5, contributing membership \$15, and sustaining membership \$25 per year.

Measles—A Disease of Yesterday

THE HIGH INCIDENCE of complications to measles in infancy and childhood has been well recognized for many years. The overt manifestations of pneumonia, encephalitis, strabismus, otitis media, etc., have made this disease a truly dread disease. These recognized complications were accepted philosophically when contact with a flourishing case had been made without provision of time for modification by gamma globulin. The inapparent complications of measles are more subtle, and, while suspected, have not been fully documented. The high incidence of abnormal electroencephalographic changes in unmodified measles suggests that the dirty fingerprints of this disease may have left behind central nervous system deficits including personality disorders and possibly mental retardation.

The development of safe and effective active vaccine protection represents a truly major break-

through in infectious disease control and offers promise to eliminate this disease from the United States and make it a disease of yesteryear. The available vaccines have been widely used and have proven to be safe and effective. No less than 6 competitive vaccines are available and have been approved and licensed by the Division of Biologies Standards of the United States Public Health Service. The American Academy of Pediatrics has recently urged that all susceptible children receive the measles vaccine. It is believed that a broad scale and vigorous utilization of measles vaccine would promise to eliminate this disease within 5 to 6 years in this country.

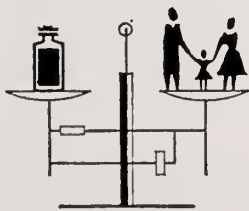
Suggested dosage schedules for measles vaccine recommended by the Public Health Service and approved by the American Academy of Pediatrics are shown in table 1.

F. G. B.

TABLE 1: Dosage Schedules for Measles Vaccines

Sched- ule	Type of Vaccine	Age	Doses* and Administration	Comment
1	Live, attenuated vaccine	12 months and older	1	Although the live, attenuated vaccine may be administered safely with or without the simultaneous administration of measles immune globulin, most physicians will wish to use the 2 combined because of the lessened frequency of clinical reactions.
2	Live, attenuated vaccine plus measles immune globulin	12 months and older	1 plus measles immune globulin (.01 c.c. per pound at different site with different syringe)	The live attenuated vaccines should be administered only to those 12 months of age or older since residual maternal antibody may interfere with a satisfactory response among younger children.
3	Live, "further attenuated vaccine"	12 months and older	1	Clinical reactions following the "further attenuated vaccine" are relatively infrequent; measles immune globulin is not necessary with this vaccine.
4	Inactivated vaccine	Any age	3† (monthly intervals) plus a booster dose after 1 year	In view of the rapid fall-off in antibody and evidence of decreasing immunity following a primary immunization series, use of this vaccine is not preferred except for special groups in which live, attenuated vaccine is contraindicated. The degree and duration of protection which might be afforded to those given a booster have not yet been determined.
5	Inactivated vaccine followed by live, attenuated vaccine	12 months and older	1 dose inactivated vaccine followed in 1 to 3 months by 1 dose live attenuated vaccine	The preceding administration of inactivated vaccine serves to reduce the frequency and severity of clinical reactions following live, attenuated vaccine administration.
		Under 12 months	3 doses inactivated vaccine at monthly intervals followed by 1 dose live attenuated vaccine at 12 months of age or older.	The live, attenuated vaccine should be administered only to those 12 months of age or older since residual maternal antibody may interfere with a satisfactory response among younger children.

* Manufacturers' directions regarding volume of dose should be followed.
† In view of rapidly declining antibody levels and protection, at least 1 booster dose about a year later is necessary. Data are not yet available to indicate when or with what frequency additional booster doses might be required.



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Second AMA Congress on Environmental Health Problems

ON SUNDAY AFTERNOON, April 25, at the Drake in Chicago, the Chairmen of the State Medical Society Committees on Environmental and Public Health met with the American Medical Association's Committee on Environmental and Public Health and with the staff of the AMA Department of Environmental Health. This was a pre-Congress session designed to identify individuals and their interests and problems at state and national levels.

Of approximately 2 dozen people present, slightly better than $\frac{1}{3}$ represented states. There was no representative, other than myself, from the District of Columbia or the states of Virginia or Maryland. Nine states seemed to be represented, namely, Colorado, New York, Mississippi, Minnesota, Oregon, Pennsylvania, Ohio, Louisiana and Illinois.

It was a long session, but there had developed since the first Congress an appreciation of the wide diversity of problems within the scope of what we think of as "environmental health." I was pleased that food pollution was given equal importance with water and air pollution. There appear to be 2 areas in need of clarification or study: established liaison between "environmental health" and "adverse reactions," and differentiation between and the importance of toxic versus "allergic" reactions. It interested me to see concern this year about the use of blood and tissue derivatives.

The Congress itself began on Monday morning, April 26, and lasted 2 days. At the morning sessions the audience was oriented on the vastness of the problem. The afternoon sessions dealt largely with changing patterns of prototype diseases that have been under intensive study as political problems for many years, such as tuberculosis and venereal disease. An interesting presentation by an internist-cardiologist, who is senior editor of JAMA, dealt with unexplained medical symptoms and disease patterns and their possible relationship to environment. This encourages one to believe that the medical profession is beginning to be concerned about relationships between disease and environment.

The sessions on Tuesday morning dealt with the effectiveness of control and prevention of certain specific environmental problems. The afternoon sessions were intended to assist the members of the Congress in preparing themselves upon return home for the job of evaluating need for study or

action, organizing programs at the state level, and preparing progress summaries for use at the next year's Congress.

Last year's Congress was pervaded by an attitude of apathy. This year, in complete contrast, there may have been an attempt to introduce too many subjects and to cover too large a field in order to prevent too much concentration on any one problem, but the general attitude was one of intense interest and genuine concern about present and future problems. Last year's Congress appeared to discredit concern and anxiety with "evidence and statistics" from industry and Government. This year there was a striking paucity of "too perfect" canned presentations with finite conclusions. The contribution that the Medical Societies can make is to determine the most urgent environmental health problems in their cities or states and how they can be met.

CLIFTON R. BROOKS, M.D.

Health Dept. Notes

Preventing Food-borne Illness

MORE THAN 1 MILLION MEALS are prepared and served daily to the public in the Greater Washington Area. More than $\frac{2}{3}$ of these are served within the District of Columbia in food establishments licensed by the Department of Public Health. There are over 2,000 such hotels, restaurants and other similar places licensed in the District.

The D.C. Department of Public Health is required by law to make periodic inspection of food preparation and service in order to ensure compliance with health regulations in these establishments.

The Health Department also investigates each individual complaint received which concerns food prepared or served in a District-licensed establishment. This is related to but independent of the periodic inspections.

There are, each year, many instances of food-borne illness reported in the District of Columbia. Some occur within the home, others in food-serving establishments. The latter are of special concern to the Department. However, all are investigated.

Such investigations are made by physicians,

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nurses and environmental health personnel. The physician interviews and examines the persons affected to determine the illness-causing agent; the nurses assist in the investigation; the sanitarians seek to re-create the food preparation and serving situation through which illness occurred. If still available, food samples are taken for laboratory analysis. Preparation and serving personnel are examined for illness or any health condition which they may be passing on to the public. The entire food area itself is checked for cleanliness and other factors.

When food-borne illness occurs the following possibilities are often found to exist:

1. Management has overestimated its capacity in food production and has accepted more commitments than it can handle safely. Food is therefore prepared too far in advance of use, then not properly stored (often not refrigerated) and subject to spoilage. Also, pressures of time and a lack of working space result in careless food-handling practices.

2. Management does not give close supervision to food preparation and serving, allowing unclean equipment and work areas or other deficiencies. Also, workers with obvious illnesses (boils and infections) are permitted to continue at work.

3. The food itself or its ingredients may have become contaminated with detergents, insecticides or other foreign materials. Often bacterial and other organisms are carried over from the raw food products.

Periodic inspection includes cleanliness of area and equipment; food storage in proper containers and at proper temperatures; suitability of food-preparation equipment and techniques, and the various other factors which affect the safety of feeding the public.

When a deficiency is found, the owner or operator is directed to make correction or face suspension of license. If the deficiency is sufficiently gross or threatening to health, the food operation will be closed until correction is made.

Responsibility for food-control programs is given the Associate Director for Environmental Health. The environmental health staff includes sanitarians, technologists, engineers, inspectors and other specialists. The staff has direct access to other Health Department facilities and personnel, notably the analytical laboratories and the Bureau of Communicable Disease Control.

Hotel, restaurant, cafeteria and other food service operators in the District are aware of their responsibility to the public and they cooperate with the Department in its efforts to

prevent food-borne illness. The incidence of such illness in the District is no greater than elsewhere in the United States. Set against the number of meals served daily in the District, it is less than 1 in a million.

The D.C. Department of Public Health is therefore organized to prevent where possible, and to investigate when necessary, whatever instances of food-borne illness may occur.

MURRAY GRANT, M.D., D.P.H.
D.C. Director of Public Health

Medicolegal Abstracts

Court-ordered Transfusions. The Illinois State Supreme Court ruled that a court order forcing an adult patient to receive a transfusion against her will and against her religious convictions was unconstitutional.

The patient had a bleeding peptic ulcer. She had discussed her religious beliefs prohibiting blood transfusion with her physician. Both she and her husband had signed documents releasing the doctor and the hospital from all liability which might result from failure to administer blood. Nevertheless, the doctor and the State's Attorney applied for and were granted a court order appointing a conservator for the patient and authorizing the conservator to consent to blood transfusion for her. The Supreme Court held this order unconstitutional.

Previous cases were cited as precedents, including the case of Mrs. Jessie Jones at Georgetown Hospital in 1963. The Court, however, felt that these cases were not determinative here.

The Court recalled that the First Amendment as extended to the states by the Fourteenth Amendment protects every individual's right to freedom of religious belief and the exercise thereof. This is only to be limited by governmental action if that exercise presents a clear and present danger to the public health, welfare, or morals. No such danger was presented by this patient.

This, then, constituted a judicial attempt to decide what course of action was best for the patient, despite her contrary views based on religious convictions. Such action was clearly unconstitutional, the Court said.

COMMENT: This clearly answers the question of obtaining court orders to force transfusions in



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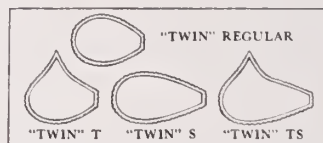
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adults whose religious convictions prohibit receiving blood.

It does not, however, apply to court orders forcing treatments (in adults) which are refused on grounds other than religious. Such circumstances have already developed. Since the first transfusion was ordered at Georgetown Hospital, other procedures, including amputations, have been ordered in adults against their wills. Until a high court rules on a case in this field, physicians must be guided by their own morality, ethics, and personal philosophy.

NOTE: The court's right to order transfusions in children over the objection of their parents is unaffected by the above decision.

M-L

Blue Shield Fees. Physicians are employees of Blue Shield, and the fees paid them by Blue Shield constitute "wages" or "salary" under Pennsylvania state law. This decision was rendered in an attachment suit against an osteopath.

A judgment was entered against an osteopath in a contract action. The judgment creditor then sought to attach the fees owed the osteopath by Blue Shield for services rendered to subscribers to the Plan. Blue Shield itself argued that these fees were exempt under a statute which exempts from attachment "... the wages of any laborers, or the salary of any person in public or private employment. . . ."

The court upheld this contention, reasoning that the osteopath's contract with Blue Shield did indeed make him an employee of Blue Shield for the purpose of performing professional services.

COMMENT: The position of an osteopath in Pennsylvania is no different from that of a medical doctor in relation to Blue Shield. Hence, the court has declared that Participating Physicians are employees of Blue Shield.

Though this decision refers to a specific statute, it is quite possible that the employee-employer relationship here defined may be applied to other situations involving physicians and Blue Shield. The possibility of such a disadvantageous position warrants serious consideration by all Participating Physicians.

M-L

Accounts Receivable. An account receivable has a cash value only to the extent of its collection. This statement by a Texas court clarified the

amount of cash due a physician who was disassociating from a partnership.

The partnership agreement clearly indicated the extent of his interest in the accounts receivable. However, the court indicated that the partnership did not owe him that amount in cash. It only owed him the same proportion of the total amount of cash ultimately collected from those accounts.

COMMENT: This type of question can be avoided by partnership agreements which state precisely the method for calculating cash value of accounts receivable.

M-L

Fees. Two points were illustrated in a decision by a Louisiana intermediate appellate court. They arose in a case in which a physician agreed to continue his treatment of a patient after another man had agreed to pay the bill.

First, the court upheld that man's obligation to pay the patient's bill (although there was no written contract).

Next came a question as to the amount due. The physician sent 2 bills, one for \$60 and another for \$225. Both were sent after his services were terminated. The doctor explained that the first bill was a preliminary one, the second indicating the full amount. The court, however, said that since there was no notation on the first bill to indicate that it was not complete, it must be considered full and complete to its date. The man only need pay the smaller, first bill.

COMMENT: The implications of the first point are clear. The second is a reminder that bills must be accurate. Itemization of the statement, in fact, would have prevented any confusion.

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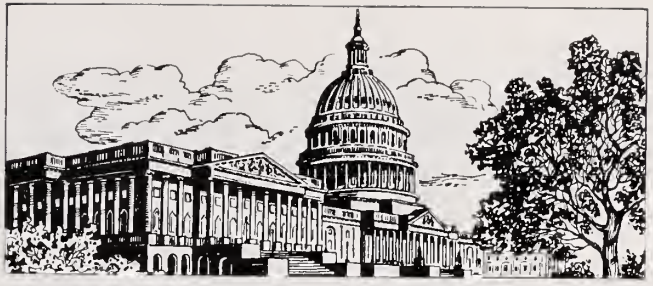
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* AMA Council on Foods and Nutrition: The Regulation of Dietary Fat, *JAMA* 181:411-423 (August 4, 1962).

AMA Council on Foods and Nutrition: Composition of Certain Margarines, *JAMA* 179:719 (March 3, 1962).



NEWS & PERSONALS

Summary of Executive Board Actions

The Executive Board of the Medical Society of the District of Columbia held its dinner meeting in the Society's building, May 17, 1965. Present were Drs. Duane C. Richtmeyer, Chairman, C. Willard Camalier, Jr., Robert J. Coffey, Karl C. Corley, Darrell C. Crain, J. Spencer Dryden, Raymond T. Holden, Kenneth L. McCoy, Edward W. Nicklas, and Mr. George Cooley, Secretary. Also present was Mr. Warren Magee, Legal Counsel. The Chairman called the meeting to order at 7:00 p.m.

Minutes of the Meeting of April 19: The minutes of this meeting were approved as mailed.

Committee Meetings: The following meetings were listed by the Secretary as having been held since the Board last met:

- April 19 Committee on Postgraduate Education (Scientific Assembly Program)
- 20 Committee on Alcoholism
- 20 Grievance Committee
- 20 Liaison Committee with Medical Schools and Hospitals
- 20 Ad Hoc Committee on Medicare
- 22 Committee on Environmental Health
- 22 Committee on Medical Aspects of Sports
- 22 Liaison Committee with Public Health Department
- 22 Traffic Committee
- 27 House Committee
- 28 Finance Committee
- May 4 Ad Hoc Committee on Medicare
- 6 Committee on Communicable Disease
- 7 Fee Review Committee
- 12 Environmental Health Committee
- 12 Board of Credentials
- 13 Liaison Committee with Public Health Department
- 14 Subcommittee on Insurance

Board of Credentials: The Executive Board approved for membership the following applicants recommended by the Board of Credentials:

Active Members

David Harold Bachhuber, D. C. General Hospital
William Frank Feller, Sibley Hospital
Daniel Lazer Glick, Georgetown University Hospital
Ralph Edward Greene, 922 East Capitol Street
James Edwin Jackson, 2104 Shipley Terrace, S.E.
Jack L. Linden, Glenn Dale Hospital, Glenn Dale, Md.
Roger Peele, St. Elizabeths Hospital

Associate Members

Mohammed Hesian Amirgholi, 4400 Stamp Road, Marlow Heights, Md.
Thomas James Hartford, 919—18th Street, N.W.
Sinen S. Pe-Pimentel, St. Elizabeths Hospital
Jerome Raphael Pomeranz, Johns Hopkins Hospital, Baltimore, Md.

Resident-Intern Members

Stavros Pantelis Karabinas, D. C. General Hospital
Ricardo Longoria, Prince George's General Hospital, Cheverly, Md.

Property Tax: Considerable discussion was given to an announcement which appeared in *The Evening Star* indicating that some 35 organizations now presently tax-exempt were being reviewed for the purpose of adding them to the real estate tax rolls. Mr. Magee discussed this announcement and the reasons why he felt this Medical Society should have a sound basis for asking for continued exemption. He suggested that various programs and activities of the Society be specified showing the extent of public service to which the Society is presently dedicated. This matter was referred to a special Ad Hoc Committee of the Executive Board, although not limited to members of the Executive Board, with the Committee authorized to pursue the matter with the assistance of Mr. Magee.

The Chairman appointed the following members to the Ad Hoc Committee: Dr. McCoy, Chairman; Drs. Coffey, Frank S. Pellegrini, Victor R. Alfaro and Mr. Magee.

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Ad Hoc Committee on Medicare: Dr. Crain reported on the activities of this Committee and distributed copies of the pamphlet prepared by the Committee, including a comparison of "Elder-care," "Medicare," and the D. C. Medical Society's program and discussed the news release to the press on the statement sent to the Senate Finance Committee. He referred briefly to the radio and television appearances that had been made and to contacts with members of Congress that had been arranged.

Dr. Camalier reviewed briefly a resolution from a state medical association calling for nonparticipation by physicians if Medicare is passed by Congress. It was voted that this Society's delegates use the following public statement by Dr. Paul R. Wilner, President, as a guide during the AMA meeting in June: "The position of the Medical Society of the District of Columbia is that we will support programs which can and do assure the best in patient care. Whatever the outcome of the present hearings before the Senate Finance Committee, it will be incumbent on all of our members to support any law which is passed to the fullest extent possible."

Dr. Holden reviewed the names and background of the possible nominees for AMA president-elect. These were discussed and the decision as to how to vote was left to the discretion of the delegates.

Liaison Committee with Medical Schools and Hospitals: The Committee approved a Project Grant (USPHS) for a cobalt unit for Georgetown Hospital after a full study and report by a Subcommittee (Drs. John A. Long and Bruce I. Shnider). It was voted to approve the recommendation of the Committee.

Public Health Advisory Council's Mental Retardation Planning Committee: A request for liaison between this Committee and the So-

ciety was approved, with Dr. John A. Washington recommended as this Society's official representative.

Committee on Environmental Health: On recommendation of this Committee it was voted that the Society become a member of the Citizens' Council for a Clean Potomac.

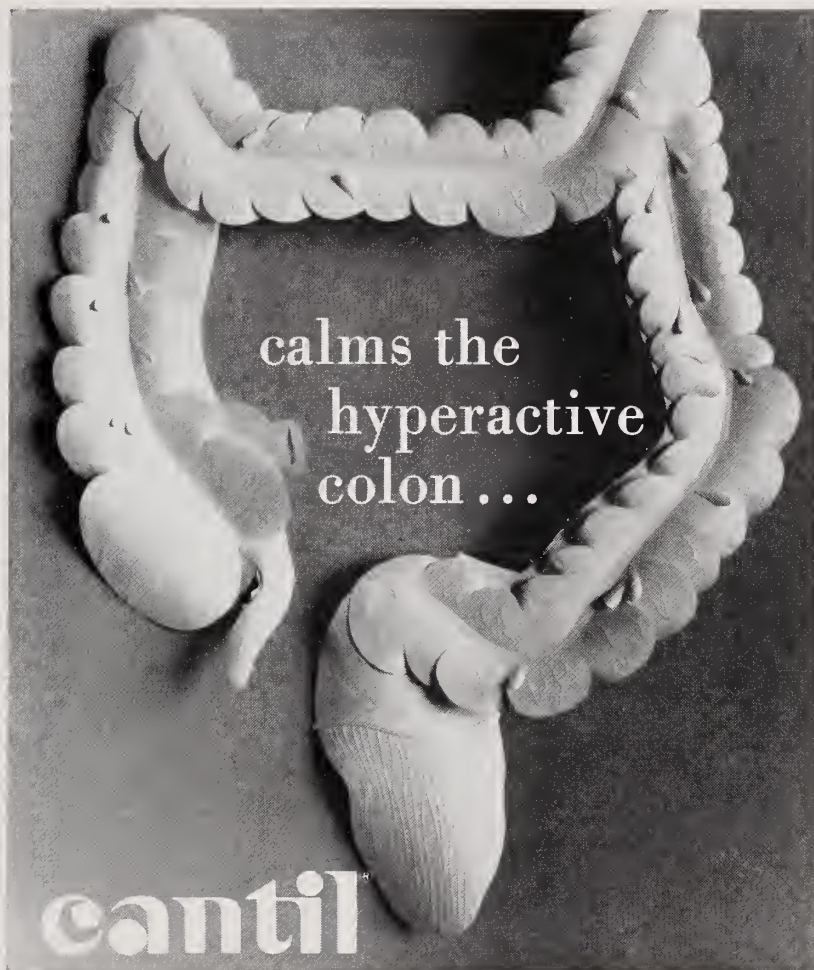
Reorganized Obstetrical Board: The names of the members of the reorganized Obstetrical Board were distributed, read by the Chairman, and approved, with a request that consideration be given to adding representation from Doctors Hospital.

Increase in Premiums for Blue Cross-Blue Shield for Society Members: The following was submitted to the Board for information only:

	1964 Family Plan	1965 Family Plan
Preferred Hospital	\$10.93	\$14.71
Surgical-Medical	4.28	10.08
	\$15.21	\$24.79

Student AMA Contributions: It was *voted* to donate \$100 to help defray the cost of SAMA representatives from the 3 medical schools to their annual meeting if such is requested.

Miscellaneous Business: (a) It was *voted* that it be the policy of this Society that, in the event of the death of a member, his widow be reimbursed, if so requested, for the unexpired period of the year, calculating to the nearest month. (b) It was *voted* to authorize the Secretary to determine why a physician carrying Blue Shield-Blue Cross family coverage in our group could not change this to individual coverage so long as his spouse was not covered elsewhere by Blue Cross. (c) The Secretary read a letter of appreciation from Rear Admiral R. B. Brown, MC, USN, for the Board's action in voting him Honorary membership status. (d) The Secretary reported on a letter from the USPHS thanking the Board for its cooperation in the study of physicians in large office buildings. (e) It was *voted* that it be the policy of this Society to bill all suspended members for their dues, since many of the Society's benefits, such as Blue Cross-Blue Shield, accident and health coverage, etc., may be retained during the period of suspension. (f) It was *voted* to change the title of the Committee on Medical Aspects of Sports to Committee on Medical Aspects of Sports and Physical Fitness. (g) It was *voted* to refer a resolution adopted by the Grievance Committee concerning emergency room care to the Committee on Medical Ethics and Professional Conduct.



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- control diarrhea/constipation
- relieve spasm, cramping, bloating
- make patients more comfortable

with little effect on stomach, bladder or other viscera.

"In 40 of 44 cases of irritable or spastic colon, Cantil [mepenzolate bromide] or Cantil with Phenobarbital reduced or abolished abdominal pain, diarrhea and distention and promoted restoration of normal bowel function . . . Cantil [mepenzolate bromide] proved to be singularly free of anticholinergic side-effects. Blurring of vision or dryness of the mouth were occasionally seen and were usually managed with a reduction in dosage. Urinary retention, noted in two cases was eliminated in one by reducing dosage."¹

IN BRIEF:

One or two tablets three times a day and one or two at bedtime usually provide prompt relief. Cantil with Phenobarbital may be prescribed if sedation is required.

Dryness of the mouth or blurring of vision may occur but it is usually mild and transitory. Urinary retention is rare. Caution should be observed in prostatic hypertrophy—withhold in glaucoma. Cantil with Phenobarbital is contraindicated in patients sensitive to phenobarbital.

Supplied: CANTIL (mepenzolate bromide)—25 mg. per scored tablet. Bottles of 100 and 250.

CANTIL with PHENOBARBITAL—containing in each scored tablet 16 mg. phenobarbital (warning: may be habit forming) and 25 mg. mepenzolate bromide. Bottles of 100 and 250.

1-Riese, J.A.: Amer. J. Gastroent. 28:541 (Nov.) 1957



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Meetings

The Annual Meeting of the American Academy of Physical Medicine and Rehabilitation will be held at the Sheraton Hotel, Philadelphia, August 22-27, 1965. An all-day session, August 23, will be opened by the President of the American Medical Association, Dr. James E. Appel. Speakers will be present from the National Institute of Neurological Diseases and Blindness, the Mayo Clinic, the Institute of Muscle Disease in New York, and the state universities of Ohio, Michigan, Washington, and New York. August 25 will feature a medicolegal discussion with top plaintiff and defense lawyers as well as a medical expert. This meeting is supported by a grant from the Department of Health, Education, and Welfare; there is no attendance charge. Further information may be obtained from Dr. M. K. Newman, 16861 Wyoming Avenue, Detroit, Michigan 48221.

The Western Hemisphere Congress on Nutrition, to be held in Chicago, November 8-11, will bring together 60 speakers from 15 nations to discuss nutritional problems and practices of the Western Hemisphere. Attendance will be limited to 1,000 persons, with proportionate representation from the disciplines of medicine, food technology, veterinary science and medicine, agriculture, dentistry, dietetics, and social anthropology. Applications to attend the Congress should be sent to the Department of Foods and Nutrition of the AMA, 535 North Dearborn Street, Chicago, Ill. 60610. The applicant's title and area of interest should be included. The registration fee of \$25 should not be sent until requested.

General News

The American College of Chest Physicians, through its Board of Regents, has established a **Resident Loan Fund** whereby resident physicians in the United States and Canada may borrow up to \$3,000 at 3 per cent interest to assist them in completing their residencies in cardiovascular and pulmonary diseases. The loans are available to residents in both medicine and surgery in approved hospitals. Application forms

may be secured by writing to the Committee on Resident Loan Fund, American College of Chest Physicians, 112 East Chestnut Street, Chicago, Ill. 60611.

Medical Economics, Inc. announces August 31 as the deadline for submitting manuscripts in its annual awards competition for "the best original article by a physician." A 10-day expenses-paid Caribbean vacation for 2 is the top award; 2 runners-up will receive cash awards of \$500 each. Manuscripts, or requests for more information, should be mailed to Awards Editor, Medical Economics, Oradell, N. J. 07649.

The newly organized Obstetrical Board, which is co-sponsored by the Medical Society of the District of Columbia and the D. C. Department of Public Health, met in the Medical Society's building, May 27, and elected the following officers to serve for 3 years:

Dr. Samuel M. Dodek, *Chairman*; Dr. Edmund F. Daley, *Vice Chairman*; and Dr. J. Bay Jacobs, *Secretary*.

Membership in the newly organized Board is open to Active and Associate members of the Society.

At the meeting of the **Section on Radiology of the Medical Society of the District of Columbia**, May 12, the following officers were elected:

Dr. Eugene J. McDonald, *Chairman*; Dr. Martin A. Thomas, *Chairman-elect*; Dr. Gregory T. Henesy, *Secretary-Treasurer*.

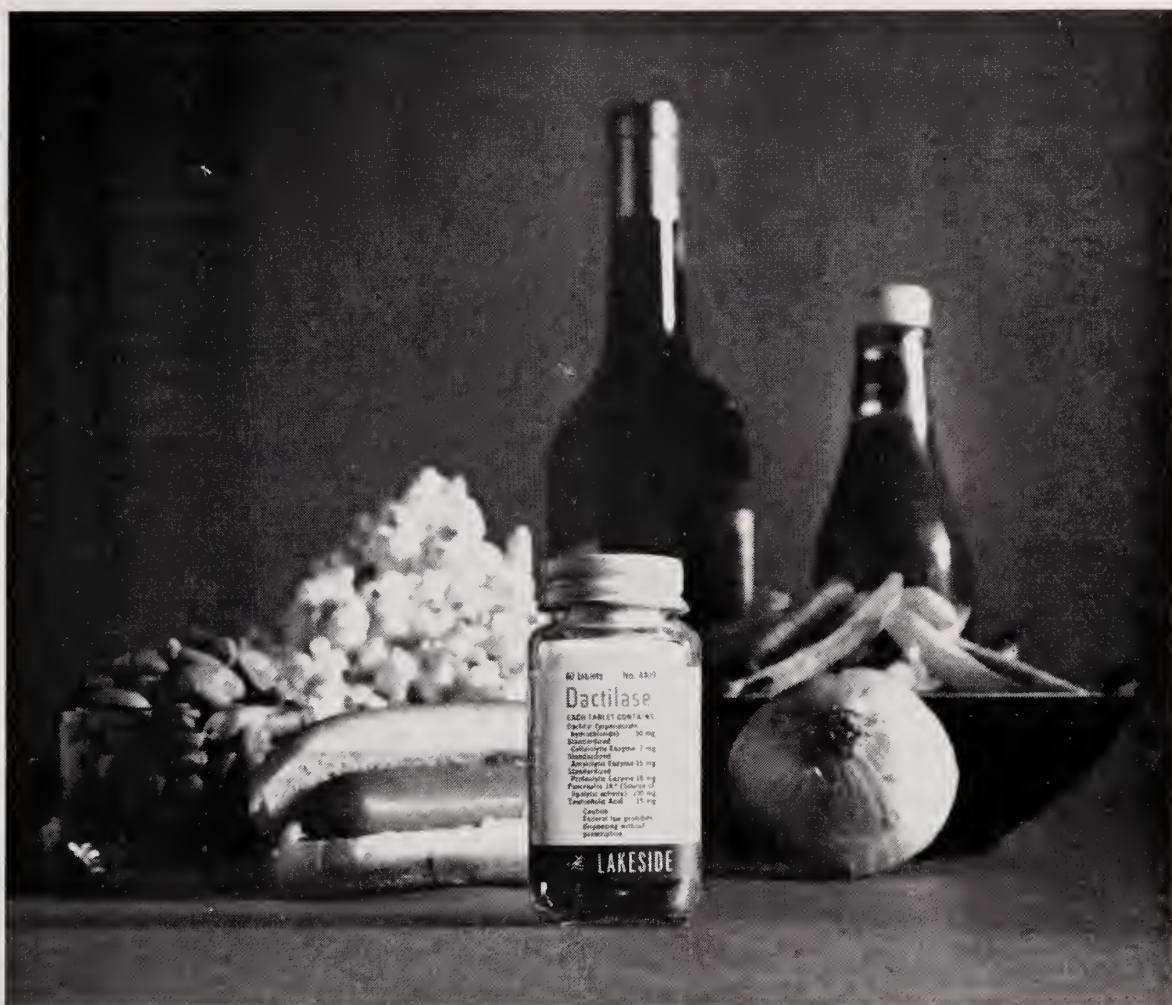
Elected Councilor and Alternate Councilor of the American College of Radiology, were, respectively, Dr. William S. Cole and Dr. William E. Sheely.

The Section on Otolaryngology of the D. C. Medical Society elected new officers, May 11. They are:

Dr. William M. Tribble, *Chairman*; Dr. Arnold S. Greenberg, *Vice Chairman*; Dr. Joseph A. Sabri, *Secretary*; and Dr. Louis B. Balla, *Treasurer*.

The Washington Academy of Surgery held its Annual Business Meeting at the Kennedy-Warren, May 10, and elected the following officers:

Dr. J. Rogers Young, *President*; Dr. Louis J. Goffredi, *Vice President*; Dr. Philip H. Philbin, *Secretary-Treasurer*; and Dr. Ralph D. Whitley, *Assistant Secretary-Treasurer*.



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Dactilase provides comprehensive therapy for a wide range of digestive disorders. Its antispasmodic and anesthetic actions rapidly relieve pain and spasm. Dactilase decreases hypermotility without inducing stasis. In addition, it supplies digestive enzymes to help reduce bloating, belching and flatulence. Dactilase does not interfere with normal digestive secretions. Very often it can be a most useful answer to the dyspeptic's needs.

DACTILASE: Each tablet contains: Dactil® (piperidolate hydrochloride), 50 mg.; Standardized cellulolytic* enzyme, 2 mg.; Standardized amylolytic enzyme, 15 mg.; Standardized proteolytic enzyme, 10 mg.; Pancreatin 3X** (source of lipolytic activity), 100 mg.; Taurocholic acid, 15 mg.

*Need in human nutrition not established. **As acid resistant granules equivalent in activity to 300 mg. Pancreatin N.F.

Side Effects and Contraindications: DACTILASE is almost entirely free of side effects. However, it should be withheld in glaucoma and in jaundice due to complete biliary obstruction.

Administration and Dosage: One tablet with, or immediately following each meal. Tablets should be swallowed whole.

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An essay contest for residents in surgery had been conducted by the Academy and the following awards were made:

First Award: Dr. Anton Dowli, Washington Hospital Center; Second Award: Dr. Albert McBride, George Washington University Hospital; Honorable Mention: Dr. Richard Finn, George Washington University Hospital, and Dr. Diller B. Groff and Dr. James A. Moncrief, both of Children's Hospital.

The Academy announces the following meeting dates for 1965-66, all scheduled at the Kennedy-Warren: October 11, December 13, 1965, February 14, April 11, and May 9, 1966.

At the spring meeting of the **National Capital Occupational Medical Association**, May 11, Dr. Eloise Kailin discussed "Chemical Allergies—New and Unusual Manifestations." Officers elected at this meeting were:

Dr. Marcel J. Foret, *President*; Dr. John H. Schulte, *President-elect*; Dr. Thomas L. Hartman, *Vice President*; and Dr. William T. Doran, Jr., *Secretary-Treasurer*.

Interested physicians who would like to join the organization should contact one of the officers.

The Metropolitan Medicolegal Society held its last meeting of the season on May 5, when Mr. Milton Korman, Principal Assistant Corporation Counsel for the District of Columbia, addressed the members. Elected to office for 1965-66 were:

Dr. Frederick B. Hartsock, *President*; Dr. Oscar Lavine, *Vice President*; Dr. William T. Spence, *Secretary-Treasurer*; and Dr. Maurice H. Herzmark, *Historian*.

Physicians who wish to join the Society should call Dr. Spence at 737-3312.

Eight faculty members of George Washington University School of Medicine were cited for 25 years of service at the dinner of the General Alumni Association, held at the National Lawyers Club, May 21. Each received an inscribed University Chair. Recipients were: Dr. Alfred Brigulio, Associate Clinical Professor of Medicine; Dr. Joseph F. Conlon, Clinical Instructor in Dental Surgery; Dr. Angus M. Griffin, Associate Dean of the School of Medicine; Dr. Robert H. Groh, Associate Clinical Professor of Neurology; Dr. Pearl B. Holly, Clinical Professor of Medicine; Dr. S. Hazen Shea, Assistant Clinical Professor of Obstetrics and Gynecology; Dr. Robert C. Vincent, Professor of Chemistry; and Dr. John A. Washington, Clinical Professor of

Pediatrics. Drs. Brigulio, Groh, Holly, Shea, and Washington are Active members of the D.C. Medical Society.

All officers of **Group Hospitalization, Inc.** were reelected for another year at the Annual Meeting of the Board of Trustees, March 20. They are: Mr. F. P. Rawlings, Jr., President; Mr. Howard W. Kacy, First Vice President; Dr. Ralph D. Whitley, Second Vice President; Mr. James H. Lemon, Secretary; and Mr. Douglas R. Smith, Treasurer.

The Board welcomed 2 new Trustees, Dr. Paul Kiernan, who was appointed to the Board last December to complete the unexpired term of Dr. Howard P. Parker, resigned, and Dr. Josephine E. Renshaw, appointed by the D.C. Medical Society to succeed Mr. F. Elwood Davis, whose term had expired.

Mr. Rawlings was reelected a member-at-large of the Board of Governors of the Blue Cross Association at the annual meeting of Blue Cross Plans in San Francisco, March 28-31.

Personals

Dr. Jonathan M. Williams, Washington neurosurgeon, headed a team of 5 doctors and 7 nurses who flew to Santo Domingo, May 22, to spend 1 or 2 weeks aiding the sick and wounded in the Dominican Republic. With him was another member of the D.C. Medical Society, **Dr. William S. Lyons**, thoracic surgeon. The others in the surgical team were Dr. William Marcus, of Silver Spring, Md.; Dr. Henry W. Jaeger, of Kensington, Md.; and Dr. Manuel J. Balseiro, anesthetist, a Cuban refugee physician living now in Silver Spring, Md., and practicing at the Holy Cross Hospital. They volunteered their services in response to an appeal from the Organization of American States for doctors and nurses to aid the Dominican people during their civil crisis.

Dr. Samuel Zola received the 1965 Honor Award from the Providence Hospital Alumni Association at its Annual Dinner, May 13, at the Woodmont Country Club. He was cited for "generous assistance and unselfish devotion to the affairs of Providence Hospital throughout the years." Dr. Zola's association with Providence goes back many years. After earning his medical degree from George Washington University in

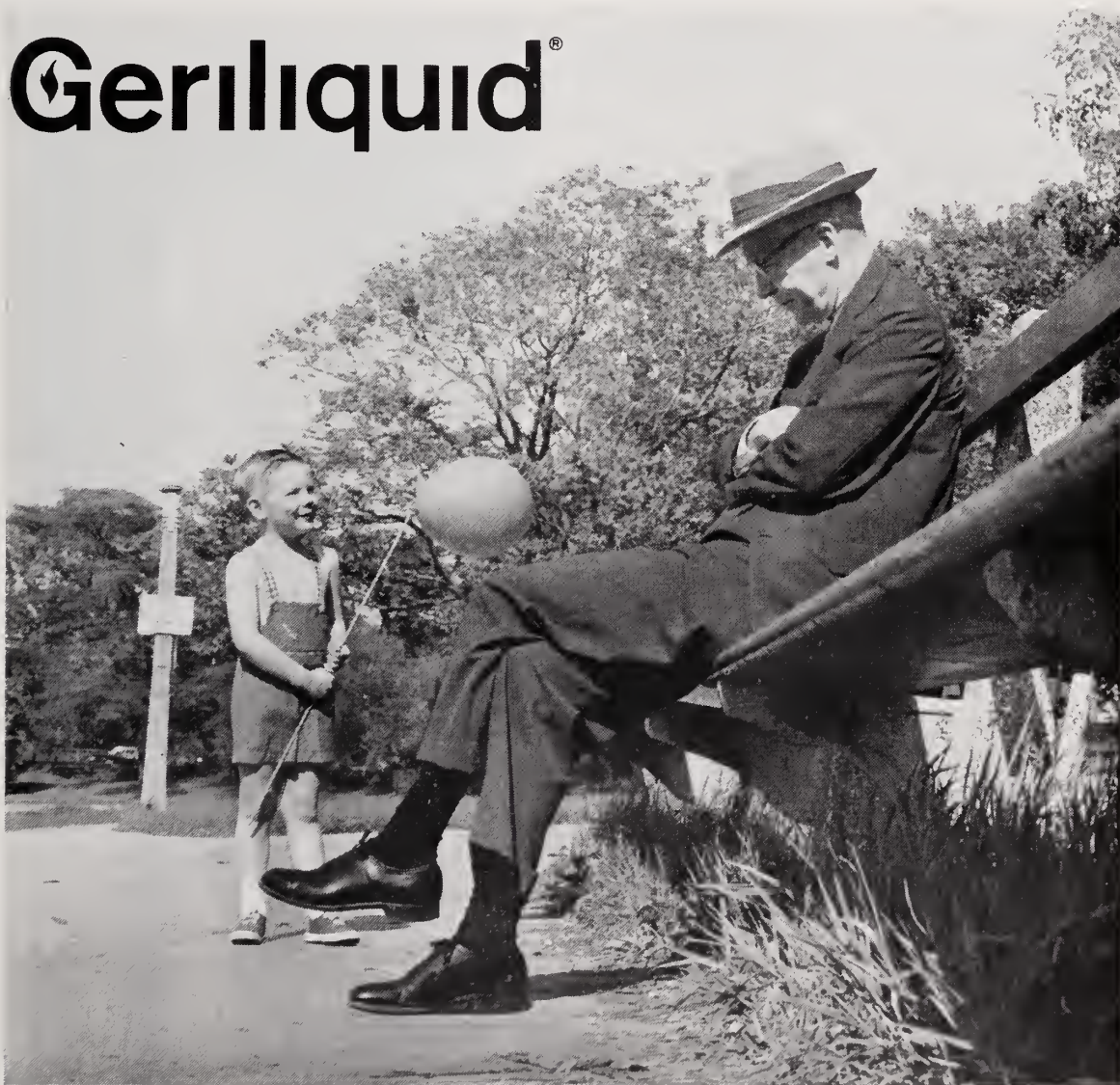
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provide rapid, sustained vasodilation for warmth and relief of pain,
dizziness and faintness in patients with impaired peripheral circulation

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impaired peripheral circulation, GERILIQUID increases the ability to walk farther with less pain. Patients particularly like the palatable, sherry wine base.

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IN BRIEF: Composition: Each 5 ml. contains: niacin 75 mg. and aminoacetic acid (glycine) 750 mg. in a palatable sherry wine base; alcohol 5%.

Side Effects: Occasional lightheadedness or transient itching which may disappear with continued use. There are no known contraindications; however, caution is advised when there is concomitant administration of a coronary vasodilator.

Administration and Dosage: One or two teaspoonfuls 3 times a day before meals. If flushing is objectionable, dosage may be lowered. However, tolerance to flushing usually develops without loss of efficacy in regard to vasodilation.

Supplied: Bottles of 8 oz. and 16 oz.

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1936, he interned at Providence and spent another year there as resident surgeon. He is now Senior Attending Surgeon and Director of the Emergency Room.

Dr. Charles A. Hufnagel, Professor of Surgery at Georgetown University, received another honor for his pioneering work in the surgical treatment of diseases of the heart and blood vessels, this one from Villanova College at a dinner in Philadelphia, May 25. He was awarded the Mendel Medal of Science, named for Abbott Gregor Mendel, an Augustinian monk, which is presented periodically for distinguished service in the advancement of science. Dr. Hufnagel was the twenty-second recipient of the medal.

Dr. Henry P. Laughlin, an Associate member of the D.C. Medical Society, was awarded a gold medal by the College of American Psychiatrists, May 4, during the Annual Meeting of the College at the Hotel Americana in New York City. Dr. Laughlin has served as President of the College during the past year. The award, "for outstanding leadership," was the first of its kind to be presented by the College.

Dr. W. Montague Cobb, head of the Department of Anatomy at Howard University, was honored by the Twelfth Street YMCA at a dinner at the National Press Club, May 17. The "Outstanding Citizen of 1964" award was conferred upon him in recognition of his long record of professional activity and generous contributions to this community and the Nation.

Dr. Edward P. Luongo has been named Associate Medical Director of Socony Mobil Oil Company, with responsibility for the Company's medical services in the United States and Canada. For the past 18 years he has been the Company's West Coast Medical Director. Dr. Luongo is Associate Clinical Professor of Industrial Medicine at the University of California School of Medicine in Los Angeles, and Associate Clinical Professor of Preventive Medicine and Public Health in the Postgraduate Division, School of Public Health.

Dr. John Newdorp, of Arlington, Va., an Associate member of the D.C. Medical Society, was elected President of the United States Eastern Amateur Ski Association at its recent convention in Atlantic City. He was President of the Washington Club in 1962, after serving 4 years on its Board of Directors.

Obituaries

Helen Gladys Kain, B.S., M.D.

(1894-1965)

Dr. HELEN GLADYS KAIN, well known Washington gynecologist and obstetrician, died, April 27, 1965 at Doctors Hospital. She lived at the Alban Towers Apartments, 3700 Massachusetts Avenue, N.W., until a few years ago, when she moved to 1830 K Street, N.W.



HELEN GLADYS KAIN, M.D.

Dr. Kain was born in Washington, D. C., September 16, 1894 to Martin J. and Katherine Kain. She attended the public schools of the District and Hall-Noyes private school. She received her Bachelor of Science degree in chemistry in 1917 from George Washington University and her medical degree, also from George Washington, in 1923. She was the first woman resident at Columbia Hospital for Women.

Dr. Kain began her practice in the District of Columbia in 1924. In 1927 she was among the group of doctors who built the Washington Medical Building, where she maintained her offices until her death.

She was on the faculty of George Washington University as Clinical Instructor in Obstetrics and

WHEN MOTHER'S IRON ISN'T UP TO MOTHERHOOD

IN BRIEF: ACTIONS AND USES: A single dose of Imferon (iron dextran injection) will measurably begin to raise hemoglobin and a complete course of therapy will effectively rebuild iron reserves. The drug is indicated only for specifically-diagnosed cases of iron deficiency anemia and then only when oral administration of iron is ineffective or impractical. Such iron deficiency anemia may include: patients in the last trimester of pregnancy; patients with gastrointestinal disease or those recovering from gastrointestinal surgery; patients with chronic bleeding with continual and extensive iron losses not rapidly replenishable with oral iron; patients intolerant of blood transfusion as a source of iron; infants with hypochromic anemia; patients who cannot be relied upon to take oral iron.

COMPOSITION: Imferon (iron dextran injection) is a well-tolerated solution of iron dextran complex providing an equivalent of 50 mg. of elemental iron in each cc. The solution contains 0.9% sodium chloride and has a pH of 5.2-6.0. The 10 cc. vial contains 0.5% phenol as a preservative.

ADMINISTRATION AND DOSAGE: Dosage, based upon body weight and Gm. Hb./100 cc. of blood, ranges from 0.5 cc. in infants to 5.0 cc. in adults, daily, every other day, or weekly. The total iron requirement for the individual patient is readily obtainable from the dosage chart in the package insert. Deep intramuscular injection in the upper outer quadrant of the buttock, using a Z-track technique, (with displacement of the skin laterally prior to injection), insures absorption and will help avoid staining of the skin. A 2-inch needle is recommended for the adult of average size.

SIDE EFFECTS: Local and systemic side effects are few. Staining of the skin may occur. Excessive dosage, beyond the calculated need, may cause hemosiderosis. Although allergic or anaphylactoid reactions are not common, occasional severe reactions have been observed, including three fatal reactions which may have been due to Imferon (iron dextran injection). Urticaria, arthralgia, lymphadenopathy, nausea, headache, and fever have occasionally been reported. Initial test doses of 0.5 cc. are advisable.

PRECAUTIONS: If sensitivity to test doses is manifested, the drug should not be given. Imferon (iron dextran injection) must be administered by deep intramuscular injection only. Inject only in the upper outer quadrant of the buttock, not in the arm or other exposed area.

CONTRAINDICATIONS: Imferon (iron dextran injection) is contraindicated in patients sensitive to iron dextran complex. Since its use is intended for the treatment of iron deficiency anemia only, it is contraindicated in other anemias.

CARCINOGENICITY POTENTIAL: Using relatively massive doses, Imferon (iron dextran injection) has been shown to produce sarcoma in rats, mice and rabbits and possibly in hamsters, but not in guinea pigs. The risk of carcinogenesis, if any in man, following recommended therapy with Imferon (iron dextran injection) appears to be extremely small.

SUPPLIED: 2 cc. ampuls, boxes of 10; 5 cc. ampuls, boxes of 4; 10 cc. multiple dose vials.

in iron deficiency anemia for rapid and predictable replacement of iron reserves

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(iron dextran injection)



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Gynecology from 1924 to 1938. During this time she was also on the attending staff of Columbia Hospital for Women and George Washington University Hospital.

Dr. Kain was known to have assisted hundreds of unwed mothers who came to her for aid. She gave unstintingly of both her professional services and finances to assist these young women.

She was an Active member of the Medical Society of the District of Columbia from 1925 to 1935 and was reflected to Active membership in 1937. In January of this year she became a Life member. She had served the Society on many committees and as Second Vice President in 1950-51.

In 1949 she was appointed to the Council of the Southern Medical Association for a 5-year term. She was also a former Chairman of its Women Physicians. She was a member of the American Medical Women's Association, and was President for several years, in the early forties, of the D. C. Women's Medical Society. Other organizations to which she belonged were the American Medical Association, the American Therapeutic Society, the American Society for the Study of Sterility, the American Geriatrics Society, the Washington Gynecological Society, the George Washington University Medical Alumni Association, and the D. C. Rheumatism Society.

She is survived by a brother, Martin James Kain, of Winnetka, Ill.

Roy Franklin Dunmire, M.D.

(1887-1965)

DR. ROY F. DUNMIRE, a Life member of the Medical Society of the District of Columbia, died, March 17, 1965 at his home, 119 Eighth Street, S.E.

Dr. Dunmire was born in Altoona, Pa., March 3, 1887, to William W. and Rosa Vail Dunmire. He graduated from George Washington University School of Medicine in 1908 and interned at the old Emergency Hospital.

Dr. Dunmire had practiced in Washington for 52 years. One of the first doctors in the District of Columbia to specialize in radiology, he helped establish the radiology service at Casualty Hospital in 1916. He served on the medical staff of Casualty from 1909 to 1930.

After working in the field of radiology he turned to general practice, and in later years he specialized in geriatric medicine.

He was elected to Active membership in the Medical Society of the District of Columbia in 1912 and became a Life member in 1953. He was a

member of the American Medical Association and the George Washington University Medical Alumni Association. He was a member of the Capitol Hill Methodist Church (formerly Trinity Church) for 50 years. He also belonged to the Columbia Masonic Lodge, the Oldest Inhabitants of the District of Columbia, and the Columbia Country Club.

He leaves his wife, Mrs. Madeline Dunmire, and a stepson, Colonel Stewart L. Baker, MC, USA, Chief of the Department of Psychiatry and Neurology at Walter Reed General Hospital.

Edward Stanton Crisp, M.D.

(1899-1965)

DR. EDWIN S. CRISP, general practitioner in Washington for 35 years, died, April 27, 1965 at Sibley Memorial Hospital. He lived at 3333 Alabama Avenue, S.E. and maintained his offices at 2300 Branch Avenue, S.E.

Dr. Crisp was a Washingtonian, born September 11, 1899 to Thomas B. and Elizabeth Crisp. He was educated in the D. C. public schools. He received his medical degree from the Medical College of Virginia, Richmond, in 1930, and interned the following year at Gallinger Municipal (now D. C. General) Hospital.

Dr. Crisp was elected to Active membership in the D. C. Medical Society in 1933 and continued his membership until 1960. He was a member of the American Academy of General Practice and the D. C. Chapter of AAGP.

His wife, Mrs. Anna Willis Crisp, died in 1960. He leaves his son, Edwin S. Crisp, Jr., of 2717 29th Street, S.E., and 2 daughters, Mrs. Charles E. Gardenhour, 3019 Parkway, Cheverly, Md., and Mrs. Nicholas Conte, 913 Shady Glen Drive, S.E.

Cerebral Vascular Insufficiency—Fazekas

(Continued from page 318)

It is important to recognize that such cases cannot be cited for the purpose of supporting therapeutic nihilism. Nevertheless, their existence emphasizes the need for highly objective evaluation of available diagnostic and therapeutic modalities with a view toward improved selection, application, and, if possible, further development of more effective techniques than are presently available.

Reference

1. KENDELL, R. E., AND MARSHALL, J.: Role of hypotension in the genesis of transient focal cerebral ischaemic attacks. *Brit. Med. J.*, 1963, **2**, 344.

the price of “success”

190

102

Hypertension has been called the price of success...and in some life-situations, the cost of failure. In either event, Metatensin lowers blood pressure, cushions the patient against stress and retards the progress of disease. Metatensin is effective and economical. It is well-tolerated over long periods.

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In Brief: Patients with hepatic cirrhosis or diarrheal syndromes, or under therapy with digitalis, ACTH, or potassium-losing steroids, should be observed for signs of hypokalemia. With thiazides, electrolyte depletion, diabetes, gout, granulopenia, nausea, pancreatitis, cholestatic jaundice, flushing, mild muscle cramps, constipation, photosensitivity, acute myopia, perimacular edema, paresthesias, neonatal bone marrow depression in infants of mothers who received thiazides during pregnancy, skin rash or purpura with or without thrombocytopenia, may occur. With reserpine, untoward effects may include depression, peptic ulcer and bronchial asthma. Withdraw medication at least 7 days prior to electroshock therapy, 2 weeks prior to elective surgery. Contraindications are complete renal shutdown, rising azotemia or development of hyperkalemia or acidosis in severe renal disease.

Supplied: Metatensin tablets, 2 mg., 4 mg. — bottles of 100 and 1000.



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BOOK REVIEWS

The Visual Fields. A Textbook and Atlas of Clinical Perimetry, 2nd ed. DAVID O. HARRINGTON, A.B., M.D., F.A.C.S. Price, \$16.00. Pp. 386, with 318 figures and 9 color plates. St. Louis: Mosby, 1964.

Dr. Harrington's first edition of "The Visual Fields," published in 1956, has already become essential for those interested in perimetry. It has won a deserved place beside such classic works as "An Introduction to Clinical Perimetry" by H. M. Traquair (who was one of Harrington's mentors) and "The Interpretation of Visual Fields," the concise manual written by C. Wilbur Rucker for the Academy of Ophthalmology and Otolaryngology.

In the preface Harrington makes the point that "the man behind the perimeter is more important than the equipment he uses." In learning the art of perimetry there is no substitute for doing field examinations on many patients with defects of various types under the supervision of an experienced perimetrist. Harrington's book provides a proper basis for such an experience as it thoroughly covers the techniques of perimetry, the anatomy of the visual pathways, and all of the clinical field defects, from those which are retinal in origin to those due to lesions of the occipital lobe. There is a final chapter on psychogenic field defects.

The illustrations are superb and should serve as a model for atlases of this type. The illustrative case material has been expanded in the second edition. The chapter on glaucoma has been revised. Discussions on pediatric perimetry and electroperimetry have been added. New developments in the anatomy and physiology of the visual pathways are concisely presented.

This volume is highly recommended for residents in ophthalmology, practicing ophthalmologists, neurosurgeons and neurologists.

WILLIAM B. GLEW, M.D.

Pediatric Procedures. WALTER T. HUGHES, JR., M.D. Price, \$7.50. Pp. 208, illustrated. Philadelphia: Saunders, 1964.

The value of any work purporting to instruct in practical procedures is somewhat polemical, the majority opinion being that to become proficient in a manual or procedural skill repeated performance under supervision is an obvious necessity. This is, however, an extreme view, as this well written and illustrated work proves. I have no doubt, for example, that anyone of average intelligence would be able to restrain a child properly after reading the directions and viewing the illustration in the chapter on restraints. Proficiency, of course, will come only with practice.

The more elaborately technical procedures, although well written and illustrated, are not intended as a "do-it-yourself" manual to be followed without "live" demonstrations. In fact, some of these procedures, such as intestinal biopsy by peroral capsule and liver biopsy, should be observed by the student several times before

performance, and performance under expert guidance should be the rule for the next few attempts.

The directions for passing a catheter into the male bladder, in my opinion, are not detailed enough in an important aspect. No mention is made of supporting the membranous urethra, a frequent point of puncture. I have also some objection, admittedly semantical, to the phrase, "by continued force. . ." because we like to teach that this procedure should be accomplished without "force."

The use of the Gomco clamp as directed is satisfactory. The procedure can be performed quicker and better without a safety pin by using a pair of hemostats to pull the cut edges of the foreskin over the cup and through the hole at the base of the clamp.

The medical student and intern should find this material very helpful as reinforcement and reference to practical demonstrations previously received.

To the clinical instructor in pediatrics who has mastered these techniques, but who finds difficulty in expression, this work is invaluable.

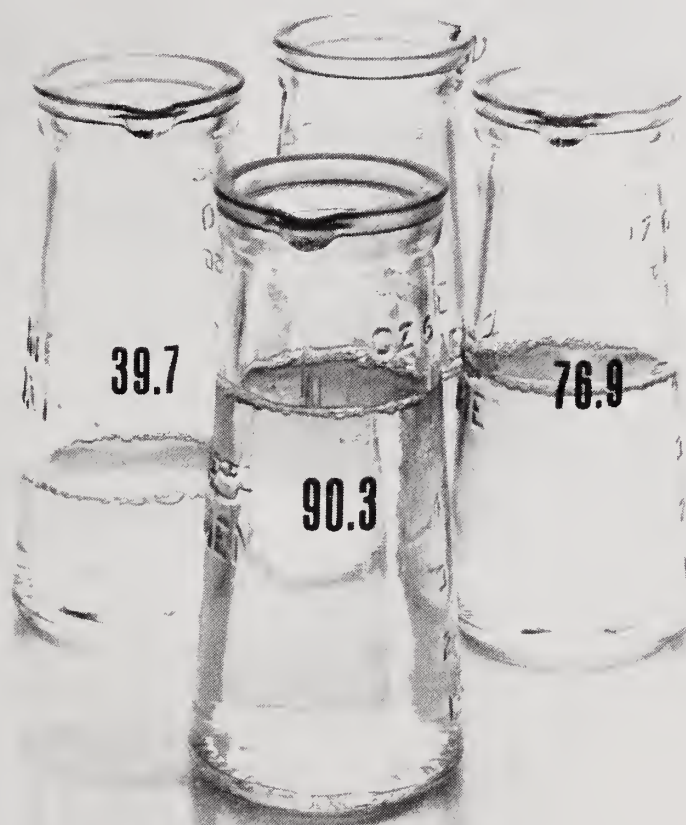
VICTOR L. ASSEVERO, M.D.

Report of the State of Maryland Commission to Study Hospital Costs to The Honorable J. Millard Tawes, Governor of Maryland. Pp. 114, plus statistical supplement. Baltimore: Commission to Study Hospital Costs, 1964.

This 200-page volume is a comprehensive and sophisticated report and recommendation to Governor Tawes made by a specially appointed Commission after a study of the general short-term hospital situation as it existed in 1963 in relation to 44 such hospitals in the State of Maryland. The volume contains a wealth of informative and supporting data in the form of tables, charts, graphs, and narrative summaries.

The Commission concludes in part: The high and continually rising cost of general hospital care in Maryland is in fact justified by a continuing increase in salaries and a reduction of work week for hospital employees, by an increase in the level of expectation among hospital users for more sophisticated and expensive services, by an increase in the rate of use of outpatient facilities in general hospitals, and by the constant need for increasing capital outlay for modernization of hospitals; length of stay and occupancy rates in Maryland are consistent with the times and with those of the rest of the country; the number of general hospital beds available is somewhat less in Maryland than might be anticipated in comparison with the rest of the country, and Marylanders use their general hospitals at a slightly lower rate than is true of the rest of the country; abuse of general hospital services and facilities is almost negligible in Maryland, but as in other parts of the country Maryland hospitals render 3 times as much service to the over-65 age group, and the

(Continued on page 28)



approximating the diuretic efficacy of meralluride

METAHYDRIN[®] (trichlormethiazide)

To determine the relative efficacy of thiazide diuretics in congestive heart failure, Metahydrin (trichlormethiazide) and three other thiazides were measured against Mercuhydrin[®] (meralluride injection)—the standard diuretic. "The results leave little doubt that the diuretic efficacy, that is, the 'ceiling effect' in these terms, is not the same for different thiazides."* The assays ranged from about 40% of the effectiveness of Mercuhydrin through 67%, 77% to 90% for Metahydrin. The latter two values were thought to be significantly different from the lowest value and to be therapeutically important.

*Gold, H., *et al*: Closed Panel Conference: Present Status of the Management of Congestive Failure and Advances in Diuretic Therapy, *Journal of New Drugs*, 1:177, July-August, 1961.

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IN BRIEF: ADMINISTRATION AND DOSAGE: One 2 mg. or 4 mg. tablet once or twice daily. In acute, severe decompensation, Mercuhydrin[®] (meralluride injection) may be necessary initially.

PRECAUTIONS: As with all effective diuretics, vigorous therapy may produce electrolyte depletion. Patients with severely reduced renal function should be observed carefully since thiazides may be contraindicated. Care should be taken with patients predisposed to diabetes or gout. Patients with a tendency to potassium deficiency, as in hepatic cirrhosis or diarrheal syndromes, or those under therapy with digitalis, ACTH, or certain adrenal steroids, also should be watched carefully.

SIDE EFFECTS: Nausea, flushing, constipation, skin rash, muscle cramps and gastric discomfort have been occasionally noted; rarely thrombocytopenia and bone marrow depression, photosensitivity, cholestatic jaundice, pancreatitis, perimacular edema, gout and diabetes have been caused by administration of thiazides.

CONTRAINDICATIONS: Complete renal shutdown; rising azotemia or development of hyperkalemia or acidosis in severe renal disease; demonstrated hypersensitivity.

HOW SUPPLIED: Bottles of 100 and 1000 tablets.

Book Reviews

(Continued from page 26)

cost per day for care of this group is somewhat higher than the average. This group and certain others often fail to pay their full share for their care with the net result that the total cost of general hospital care is misapportioned among hospital users who can and do pay.

The Commission proposes that there should be formed in Maryland a new "Council for Hospital Affairs" which would have the responsibility for and the power to effect appropriate systems of hospital accounting and appropriate distribution of costs of patient care among users, a program to help teach physicians and the public how better to use its hospital facilities, and a mechanism for advice and control on health-welfare functions and facilities in Maryland to avoid unnecessary duplication of facilities and services and to correlate and control functions and relations between Federal, state and private agencies of the health-welfare field.

The book is short, well organized, and well worth reading by all who work in the health and welfare fields.

OTIS R. FARLEY, M.D.

Ciba Foundation Symposium Jointly with the Coördinating Committee for Symposia on Drug Action: Animal Behaviour and Drug Action.

HANNAH STEINBERG, Ph.D., Editor for the Coördinating Committee; A. V. S. DEReUCK, M.Sc., D.I.C., AND JULIE KNIGHT, B. A., Editors for the Ciba Foundation. Price, \$13.00. Pp. 491, with 103 illustrations. Boston: Little, 1964.

This book contains the many papers and recorded discussions of the 47 participants in the Symposium on Animal Behaviour and Drug Action held at the Middlesex Hospital Medical School and the Ciba Foundation in England, March 25-28, 1963. The participants were from both sides of the Atlantic and represented various scientific fields, such as pharmacology, physiology, psychology, ethology, neurology, and psychiatry. Many charts, diagrams, and lists of references add to the material presented in the research papers.

The common cause of this heterogeneous group is "... to develop a science of psychopharmacology which one day may provide a rational foundation for the use of drugs in mental illness in the same way that organic chemistry does for the synthesis of new compounds." Controlled experiments on animals can help to pinpoint the behavioral effects of the drugs. But only about 10 per cent of the 3,000 or so papers noted in Psychopharmacology Abstracts for 1961 were mainly concerned with behavioral studies.

A few quotes from the text give an idea of the problems that arise: "The chronic administration of a fear-reducing drug can reduce chronic anxiety, but drugs cannot discriminate between realistic and unrealistic dangers." "One would in general expect a stimulant drug to enhance performance, whatever it may be, and a depressant drug to interfere with it.

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However, if the depressant is interfering with something which itself is interfering with performance, one would end up with an enhancement." "... For practical reasons, most of the work with drugs must be done on animals, mainly rats and mice, whose brains and behaviour differ much more from those of man than do, for example, their circulatory systems."

Among the subjects taken up in the papers are ethological studies of social behavior in animals; operant behavior, reward and punishment; "stop" and "go" mechanisms of the brain; the opposite effects of chlorpromazine and LSD-25 on the mechanisms concerned in the filtering and integration of sensory information in the brain; and the effects of laboratory scheduling, past experience, heredity, animal group changes, nutritional states, etc., on animal behavior. There is no such thing as a "standard rat." Some intuitive reasoning is necessary; and information derived under "rigid" conditions is proportionately of less value in predicting drug effects in man than are studies conducted with the intact, unrestricted organism. As one participant put it, "The human animal, however, like other animals, is capricious. Despite all advances in the art of prediction, he will continue to respond to drugs as he 'damn well pleases.'"

The cost of evaluating a single new compound in man is now well over \$100,000. This book will be of value to those researchers who must concern themselves with avoiding wasteful pitfalls and short-sighted research in psychopharmacology.

ARCANGELO D'AMORE, M.D.

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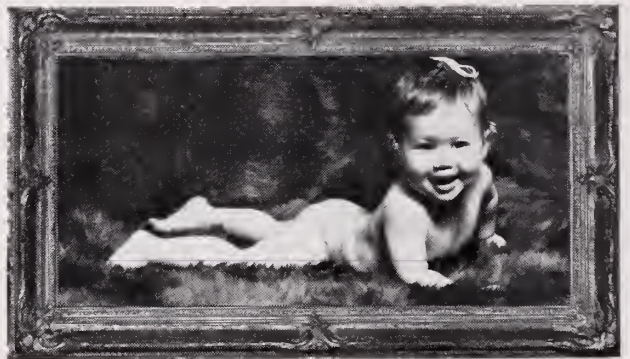
Contraindications and Precautions: Glaucoma, urethral or ureteral spasm, recent myocardial infarction, severe coronary heart disease and epilepsy. Should not be given within two weeks of treatment with a monoamine oxidase inhibitor. Safety in human pregnancy has not been established.

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1—Pomeranze, J., and Gadek, R.J.: Am. Pract. & Digest Treat. 8:73-77 (Jan.) 1957

2—Asher, L.M.: Am. J. Digestive Diseases 4:272 (Apr.) 1959



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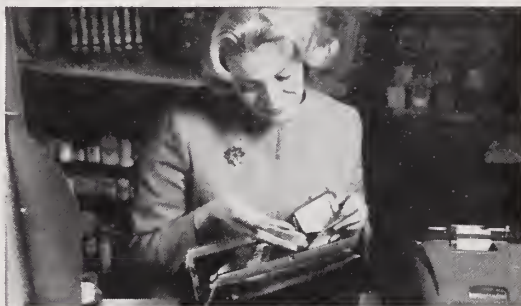
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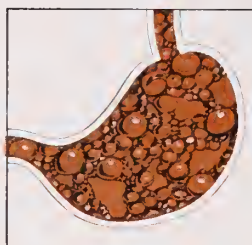
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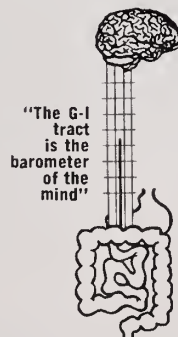
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September 10: Medical and Chirurgical Faculty of the State of Maryland. The Commander, Ocean City, Md. Address: Mr. John Sargeant, *Executive Secretary*, 1211 Cathedral Street, Baltimore, Md. 21201.

September 16-18: International Cardiovascular Society (Seventh Congress). Bellevue-Stratford Hotel, Philadelphia. Address: Dr. Ralph A. Deterling, Jr., *Secretary-General*, 171 Harrison Avenue, Boston, Mass.

September 27: Society for Pediatric Radiology. Washington Hilton Hotel, Washington. Address: Dr. John L. Gwinn, *Executive Secretary*, Children's Hospital, 4614 Sunset Blvd., Los Angeles 27, Calif.

September 28-October 1: American Roentgen Ray Society. Washington Hilton Hotel, Washington. Address: Dr. James C. Cook, *Managing Director*, 10 Peterboro Street, Detroit, Mich.

October 14: George Washington University School of Medicine: Symposium on Suicide—Its Nature, Causes and Prevention. Lisner Auditorium, Washington. Address: Dr. Leon Yochelson, *Chairman*, Department of Psychiatry, 901 23rd Street, N.W., Washington, D.C. 20037.

October 17-21: Fifth International Congress of Chemotherapy and Interscience Conference on Antimicrobial Agents and Chemotherapy. Shoreham Hotel, Washington. Address: Dr. R. W. Sarber, *Executive Secretary*, American Society for Microbiology, 115 Huron View Blvd., Ann Arbor, Mich.

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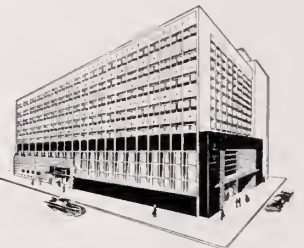
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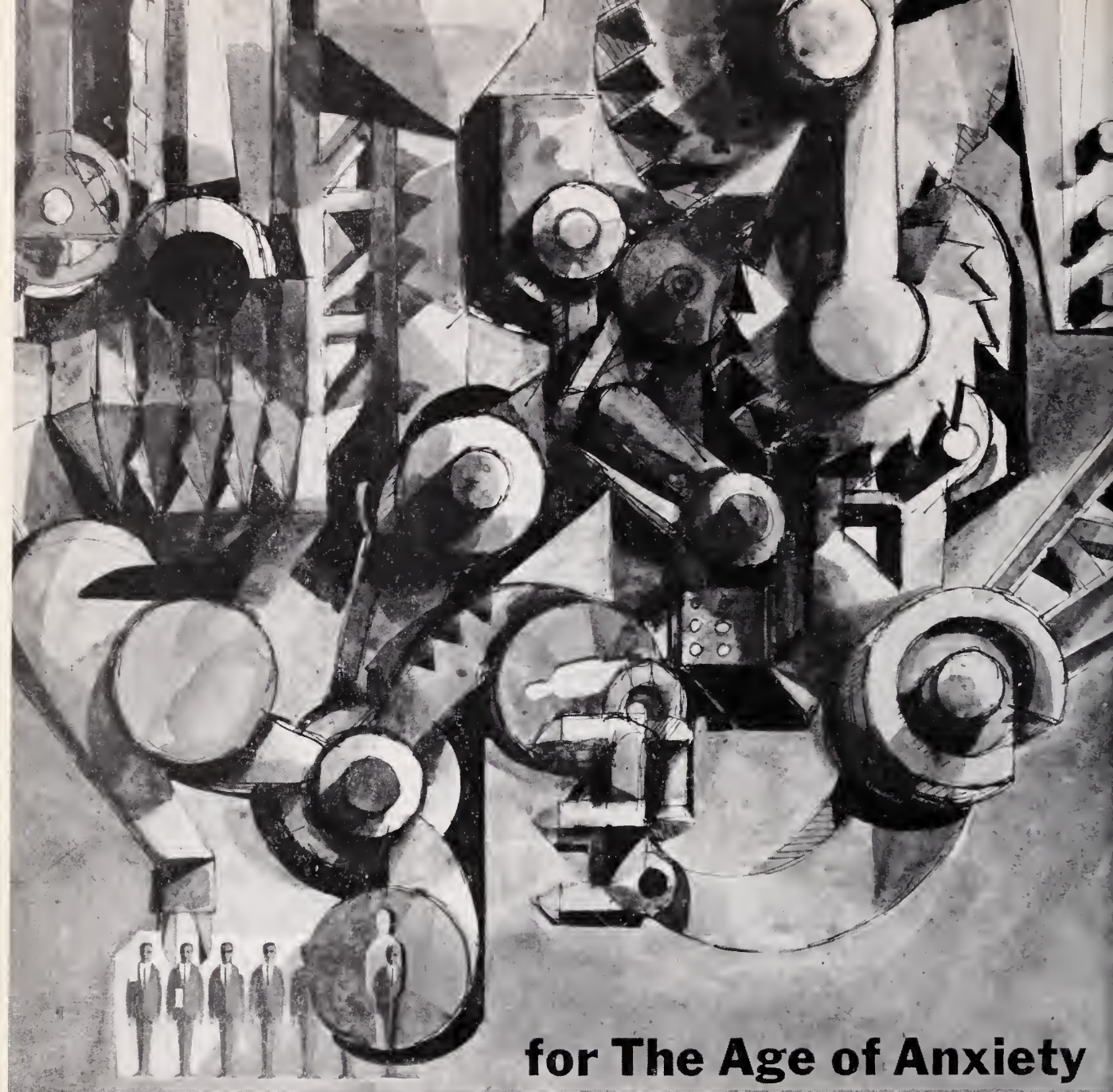
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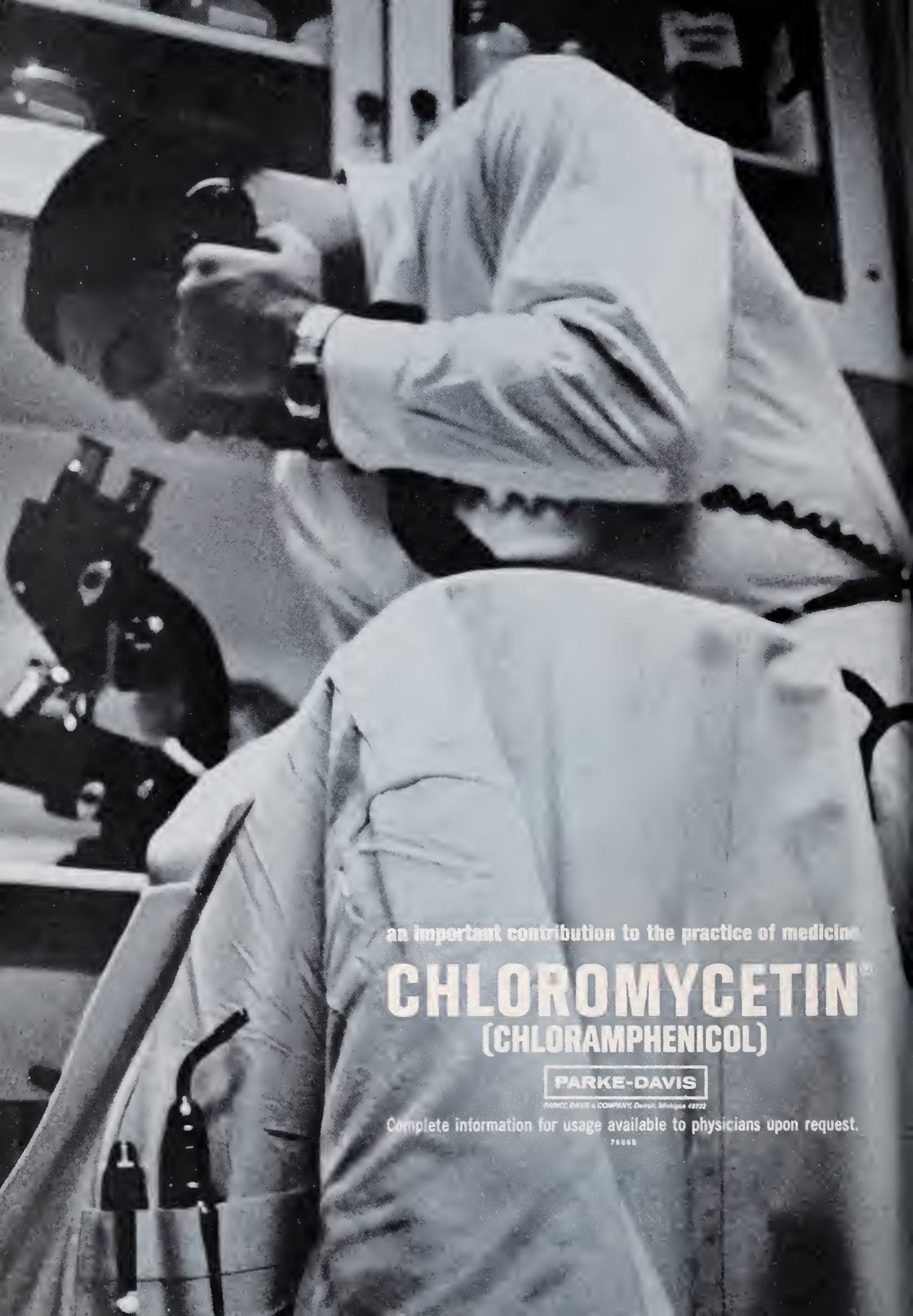
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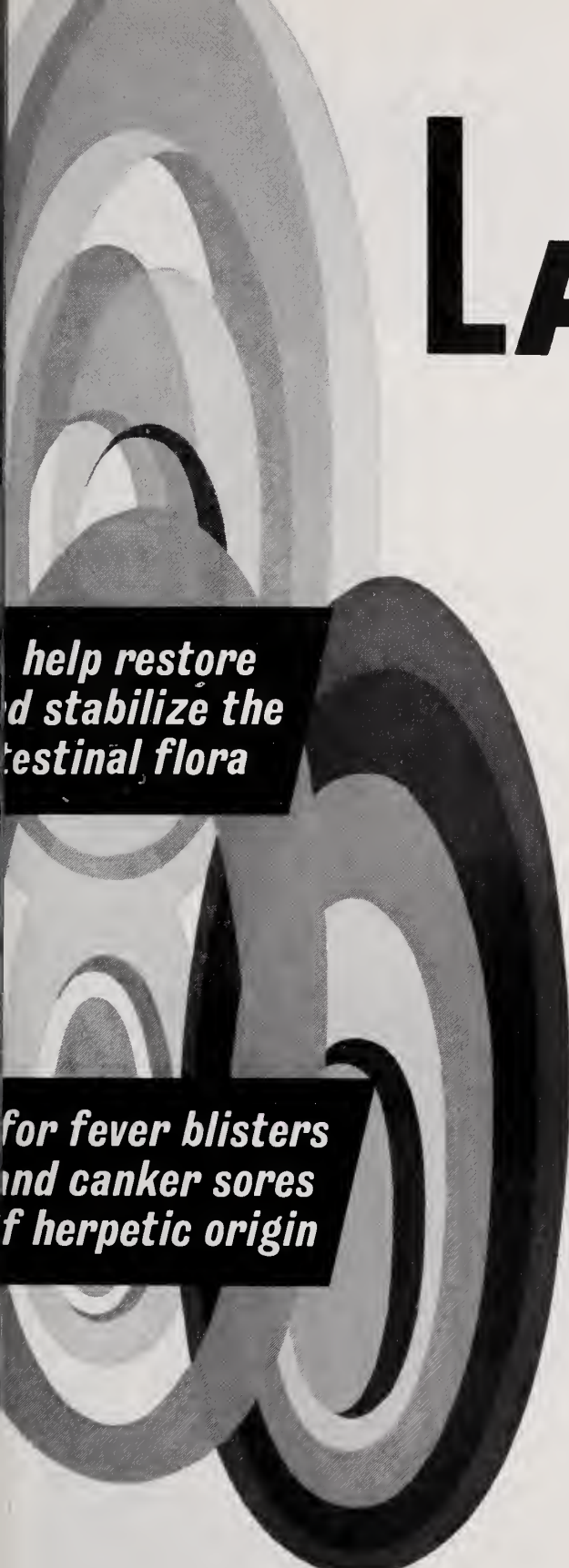
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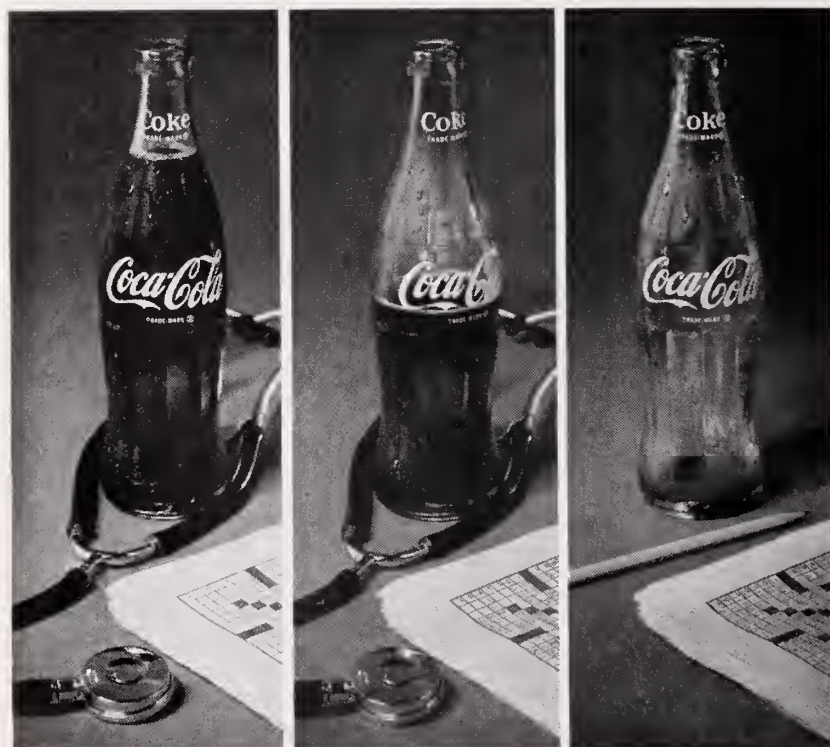
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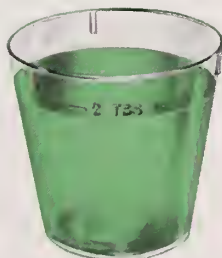
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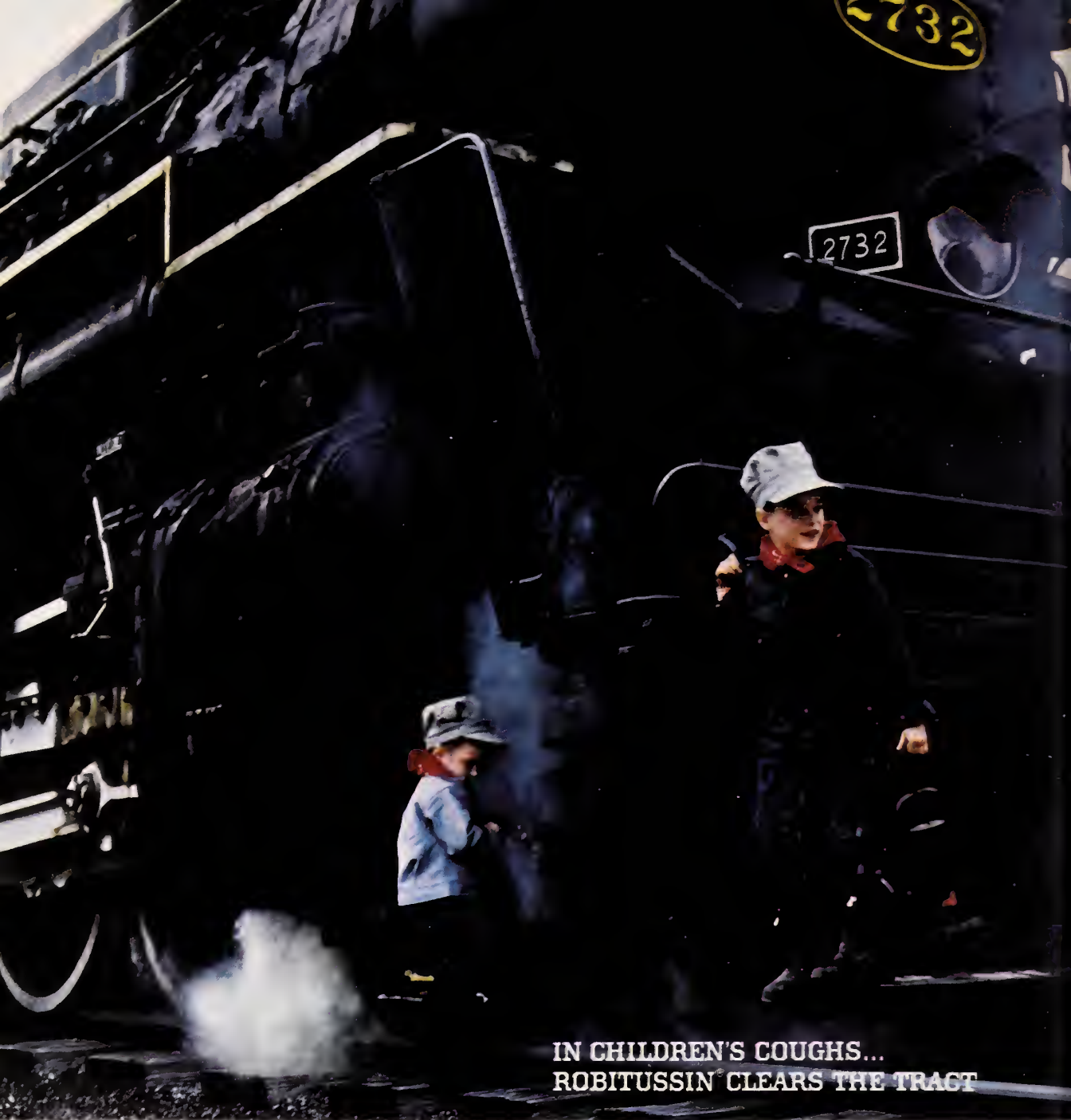
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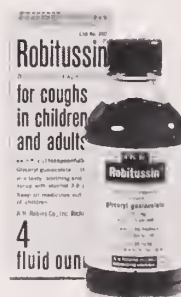
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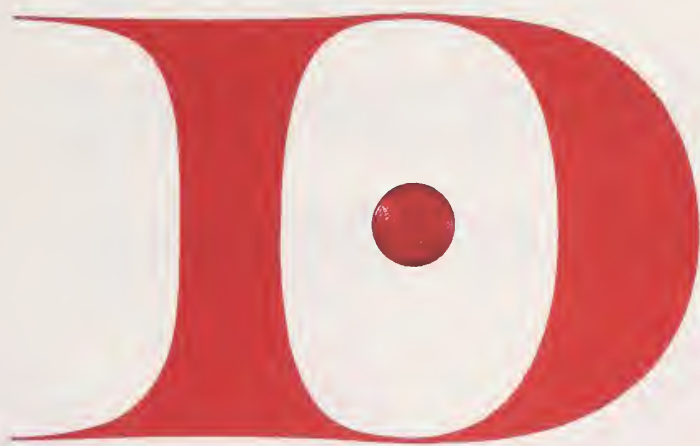
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The average adult daily dose of DECLOMYCIN Demethylchlortetracycline (600 mg.) may be considered to be the equivalent of 1,000 mg. of tetracycline per day.

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Cystitis	Syphilis
Endometritis	Pustular Folliculitis
Erysipelas	Pyelonephritis
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Genitourinary Infection	Sinusitis
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DECLOMYCIN Demethylchlortetracycline is indicated for surgical and dental preoperative and postoperative prophylaxis of infection in contaminated fields. Since penicillin is the drug of choice for syphilis and gonorrhea, it should be employed in these infections except in patients with a history of penicillin allergy.

In cases of acute gonococcal urethritis where a primary or secondary lesion of syphilis is suspected, proper diagnostic procedures including darkfield examination should be followed. In all other cases where concomitant syphilis is suspected, serological tests should be made monthly for at least three months.

In patients with agammaglobulinemia or hypogammaglobulinemia and recurring infections, it is necessary to treat with both gamma globulin and an antibiotic such as DECLOMYCIN Demethylchlortetracycline.

DECLOMYCIN Demethylchlortetracycline shows activity against some strains of *Pseudomonas* and *Proteus* heretofore unresponsive to tetracycline therapy as shown by both *in vivo* and *in vitro* studies.

In the treatment of staphylococcus infections, indicated surgical procedures must be performed in all cases.

WARNING: If renal impairment exists, even usual oral or parenteral doses may lead to excessive systemic accumulation of the drug and possible liver toxicity. Under such conditions, lower than usual doses are indicated and if therapy is prolonged, demethylchlortetracycline serum level determinations may be advisable.^{1,2,3}

A photodynamic reaction precipitated by direct exposure to natural or artificial sunlight has been observed in some individuals. Small amounts of drug and short exposure to these sources of sunlight may produce an exaggerated sunburn reaction which may range from erythema over the exposed parts of the body to severe skin manifestations. In a smaller proportion, photoallergic reactions to this drug, as well as other tetracycline derivatives, have also been reported.

Such patients should be warned to avoid direct exposure to natural or artificial sunlight while under treatment and to discontinue the drug at the first evidence of skin discomfort.

Necessary subsequent courses of treatment with tetracyclines should be carefully observed.

PRECAUTIONS AND SIDE EFFECTS: The use of antibiotics occasionally may result in overgrowth of nonsusceptible organisms. Constant observation of the patient is essential. If new infections appear during therapy, appropriate measures should be taken.

Demethylchlortetracycline may form a stable calcium complex in any bone forming tissue with no serious harmful effects reported thus far in humans. However, use of demethylchlortetracycline during tooth development (= last trimester of pregnancy, neonatal period and early childhood) may cause discoloration of the teeth (=yellow-grey-brownish). This effect occurs mostly during long-term use of the drug but it has also been observed in usual short treatment courses.

As with all other antibiotics, side reactions which might be encountered include glossitis, stomatitis, proctitis, nausea, diarrhea, vaginitis and dermatitis. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Rare cases of anaphylactoid reactions have been reported following demethylchlortetracycline. Appropriate precaution is advised.

With full therapeutic doses in infants, increased cranial pressure with bulging fontanels has been observed. The frequency has been rare and all signs and symptoms have disappeared rapidly upon cessation of treatment.

ADMINISTRATION AND DOSAGE: **ADULT:** The average daily adult dosage is 4 divided doses of 150 mg. each or 2 divided doses of 300 mg. each. An initial dose of 300 mg. may be used in the more severe infections, but a single dose exceeding 300 mg. is thought to be unnecessary.

INFANTS AND CHILDREN: The dosage is 3 to 6 mg. per pound body weight per day or 6 to 12 mg. per Kg. per day, divided into 2 or 4 doses dependent upon the severity of the disease. This should not be given with milk formula or other calcium containing foods and should be given at least one hour prior to feeding.

Because of the cumulative effect in the body, continuation of high doses beyond the first few days is thought to be unnecessary.

Therapy should be continued beyond the time when characteristic symptoms or fever have subsided; however, DECLOMYCIN Demethylchlortetracycline, because of its unique property of prolonged stability in body fluids, permits serum activity for 24 to 48 hours after the last dose. The incidence of rheumatic fever or glomerulonephritis following streptococcal infections suggests that therapy of a streptococcal infection should be continued for 10 days, even though symptoms have subsided.

In the treatment of syphilis a dosage schedule of a total of 12 to 18 Gm. given in equally divided doses over a period of 10 to 15 days should be followed. Close follow-up observation of the patient is recommended, including appropriate laboratory tests, since demethylchlortetracycline has not had adequate evaluation in all stages of syphilis. Spinal fluid examination should be included as part of this follow-up.

Primary Atypical Pneumonia (Eaton Agent): The average adult daily dosage is 900 mg. in 3 divided doses for six days.^{4,5,6}

In the treatment of pustular acne vulgaris an initial dose of 600 mg. daily for one or two weeks may, in most cases, be reduced to 300 mg. or 150 mg. daily for remainder of treatment course.⁷

Absorption is impaired by the concomitant administration of high calcium content drugs such as some antacid medications, foods and some dairy products such as milk. Oral forms of demethylchlortetracycline should be given 1 hour before or 2 hours after meals.

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*Swartz, C., et al.: Circulation 28:1042, 1963.



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Recent Developments in Biologic Effects of Laser Radiation

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THE RECENT DEVELOPMENT of the laser beam has stimulated much basic and applied research on laser radiation in biology and medicine as well as physics and engineering. The word laser means light amplification by stimulated emission of radiation.

The use of light energy in medicine is not a new concept. The ophthalmologists have used focused light to coagulate retinal tears, tumors, and vascular anomalies for several years now.¹ If we extend our definition of light to include wavelengths beyond the visual spectrum (3,800–7,800 Angström wavelength for blue through red light), it is realized that infrared energy is used for warming the skin and energy of longer wavelengths for diathermy. In the direction of shorter wavelengths ultraviolet energy is used to tan the skin and treat some dermatologic disorders, X-ray energy is used to photograph internal body structure, and shorter wavelength X-ray and gamma-ray energies are used in cancer therapy. All these uses for light (electromagnetic radiation) depend upon the type and extent of interaction of the light energy with the living body. Reflection, absorption, and transmission are indices of this interaction and depend upon physical characteristics of both the particular portion of the body intercepting the light and the light itself.

If we interpose a particular medium (such as a filter, lens, or reflector) in the path of the light

beam directed toward an object, the light will interact first with this medium so as to change the characteristics of this light before it reaches an object. In this way one can control the properties of this light (by filtering out certain wavelengths, collimating and focusing the energy toward a point, or reflecting a fraction of the light). Until recently man's control over this light was limited by the lack of coherence in the light beam. A given light source always produced a light beam containing light waves of many different wavelengths (or "colors") side by side in space and following one after the other in time. Hence, chromatic aberration was a problem causing difficulty in collimating all the photons of light energy into a parallel beam and focusing this light to the exact same point with a lens system. In other words, increasing the intensity of light by concentrating it further in space was limited (whether measured in terms of brightness as candles/cm.² or in terms of power-density as watts/cm.²). Attempts at filtering out all the light except 1 wavelength so as to eliminate chromatic aberration resulted in a smaller focus, but the filter itself reduced the light intensity to levels not useful.

Laser light is ordinary light which has been made coherent both in space and time so that not only are all the electromagnetic waves nearly the same length but also the crests of adjacent waves fall on the same plane. Since a filter is not used,

monochromatic light of millions of watts of power can be focused down to create extremely intense power-density of billions of watts/cm.² Furthermore, this coherency results in exceedingly intense magnetic and electrostatic fields capable of being created at the focus. Another characteristic of laser radiation is the capability of the light energy to be delivered continuously (low powers of less than a few watts available in the present state of the art) or emitted in a millisecond or even in a 10 nanosecond interval (yielding high power levels up to a half billion watts). The latter situation results in laser-tissue interaction over a time period so short that the intense focal heat is absorbed and the target (tissue for example) reacts before the heat can be conducted away. In an open system (where created gases may expand freely) this results in a lesion sharply limited to the beam pathway; and the depth of the lesion depends upon the absorption, reflection, and transmission properties of the particular tissue for the given wavelength of light.

There are many types of laser systems, and no attempt will be made here to describe them. The physics and engineering details can be referred to in the scientific literature.²⁻⁷ Briefly, large quantities of specific orbital electrons of certain atoms in an "optical cavity" are caused to absorb energy, thus becoming high-energy electrons, and then they are stimulated to cascade back down to their ground state (before they can do so spontaneously), releasing their energy in the form of laser light of a specific wavelength. The "optical cavity" may be a ruby crystal rod with parallel ends or any number of other specific materials. The emitted beam can then be controlled with a glass lens or reflecting system to collimate the light into a beam of minimal divergence for communication over thousands of miles or to focus the energy to give maximum intensity for welding or burning holes through materials. Uses in communications, radar, weaponry, photography, industry, chemistry, biology, and medicine are being explored extensively.

Biomedical Applications

At a recent symposium it was apparent that a major problem in assaying the biologic effects of laser radiation is that of being able to accurately measure the actual amount of energy released by the laser cavity and that absorbed by the target during a single pulse of laser radiation.⁸ Pulsed laser radiation (especially 6,943 Å red light from a ruby cavity or 10,600 Å infrared light from a neodymium cavity) has been used because of the

greater power obtained. Each pulse lasting anywhere from a few milliseconds to less than a microsecond may contain anywhere from less than one-tenth of a joule or over a thousand joules of energy (1 joule is equivalent to 0.24 calories of energy and 1 watt of power is 1 joule per second). A typical laser unit of moderate energy output per pulse delivers 100 joules or 24 small calories of light in 2 milliseconds (equivalent to 50,000 watts of power). Uniform calibration of energy-measuring instruments responding to such rapid energy delivery has been a problem. Measurement of amount of energy reflection, absorption and transmission as the laser beam interacts with a living object within milliseconds has been difficult. Finally, what portions of the pathologic tissue changes are due to photochemical changes, heat coagulation, explosion phenomena and shock waves, or creation of intense electrostatic field potentials remains to be determined.

After ophthalmologists developed the use of incoherent light for coagulation of retinal lesions it was only a step further to apply a laser beam for the same purpose.⁸⁻¹³ These studies indicate, for example, that a single 0.5 joule pulse of red ruby laser light lasting 0.5 msec. may cause the following injury when focused on the retina: a small chororetinal hole surrounded by a 0.2 mm. diameter zone of black charring surrounded by a 0.6 mm. diameter zone of blanched coagulated tissue surrounded by a cuff of edema. A small gas bubble forms, and focal hemorrhages frequently occur. A few weeks later adhesions between the choroid and retinal layers are seen with necrosis and inflammatory cells at the focal point. The size of the lesion is increased by raising the energy of the pulse or by increasing pigmentation of the target. The main advantage pulsed laser radiation has over conventional light coagulation of the retina is the very much smaller time needed to produce the desired effects. This allows less danger of error through eye movement but prevents time control of lesion size by the physician. The lesion can be localized to a smaller area.

Of major interest are the hazards to eyes of personnel working with laser equipment.^{8, 14, 15, 16} Since direct or reflected laser radiation can damage the retina of workers in this field, it is advisable to look away and cover one's eyes when a pulse of laser radiation is emitted. Warning signs should be visible. Special copper sulfate impregnated glass is recommended for goggles to be worn by personnel working with the red or infrared laser spectrum.

The skin of man and animals is being radiated for study of effects.^{8, 17, 18} When a single 30-joule

pulse of the infrared laser beam is focused on the abdominal wall of a hamster for 1 millisecond, second degree burns 3-8 mm. in diameter occur.¹⁷ With a 50-joule pulse, hemorrhage and edema occurred through the abdominal wall and subserosal surface of adjacent gastrointestinal tract indicating sufficient transfer of energy through the abdominal wall to cause internal injuries. Using rapid serial microcinematography of the skin Fine et al⁸ demonstrated rapid ballooning and then collapse of the skin at the site of laser impact. It was thought that this was due to steam ballooning out the local tissues. At the same time a plume of rapidly mushrooming cloud (vapor and particulate matter) dissipated into the air. There was an increase in free radicals at the site of impact. Helwig et al⁸ also noted enzymatic and histochemical alterations in the skin. Goldman⁸ found greater damage if pigmented skin was the target (melanin and hemoglobin absorb much energy), if red-absorbing vital dyes (Evans blue, methylene blue, Janus green) stained the target, and if the infrared rather than the visual red laser beam was used.

Studies of the effects of laser radiation on brain tissue are in progress. Radiation of the mouse brain through the intact scalp and skull with a single pulse of unfocused 100-joule red ruby laser energy resulted in 75 per cent of the mice being dead within 24 hours. Hemorrhages were seen along the path of the beam in this study by Fine et al.⁸ Earle et al⁸ delivered a similar 20-40-joule pulse to intact cranium of rats and mice. The scalp was severely burned. Acute subdural, subarachnoid, and intracerebral hemorrhages occurred along the projected path of the focused beam. The most lethal situation occurred when the larger energies were used, smaller rodents were the targets, and the focal point was estimated to be inside the intracranial cavity. Further investigations of these effects have been carried out by Fox et al.¹⁹ Their results indicate the mechanism of death in these animals. Essentially, when sufficient energy is absorbed by the intracranial tissue over a very small time period, an explosion sufficient to herniate portions of the brain through the tentorial notch and through the foramen magnum occurs. Because much of the light energy is reflected and the rest is absorbed exponentially by intervening tissues before it enters the intracranial cavity, most of the laser energy incident upon the surface tissue does not reach the intracranial cavity. However, in rodents only about 1 small calorie absorbed in less than a cu. mm. of brain tissue in the closed intracranial space is

sufficient to kill these animals immediately. In other words, with the pulsed (time magnification), focused (space magnification) laser beam the light energy has achieved sufficient power-density to effect rapid conversion of tissue into an expanding gaseous state inside a rigidly closed cavity. These studies have led into further research on changes in the blood-brain barrier, brain edema and swelling, and mechanisms of death. Possible uses of forms of laser radiation to cut or coagulate exposed tissue are being investigated. Findings to date with the pulsed ruby laser show marked disruption of tissue and vessels leading to hemorrhage.

Investigations into the cancerocidal activity of laser radiation have been carried out by McGuff et al,^{8, 20} Klein et al,⁸ and Minton et al.^{8, 21} Their studies on animal tumors show evidence of regression and permanent destruction of melanomas and other neoplasms as long as the tumor is localized. The pigmented tumors are the most readily destroyed since they absorb more light energy. A surgical approach is needed to expose internal tumors. High-energy laser units generally are used. There seems to be a selective effect on cancer tissue which is much more adversely affected than the normal tissue. Some authors indicate that neoplastic tissue beyond the zone of direct laser radiation also degenerates over a few days following radiation.²⁰ However, others state that nearby neoplastic tissue does not exhibit delayed degeneration and if not initially destroyed by laser radiation at the moment of impact will continue to grow and cause death of the animal.²¹ Research is in progress to clarify this point. There is as yet no clinical justification for substitution of laser radiation for present methods of cancer therapy. Other wavelengths (such as blue-green and ultraviolet) need to be studied in the future regarding their cancerocidal as well as cancerogenic and genetic effects.

Interesting results have been noted by authors using a low energy laser beam as a microsurgical tool under the microscope to obliterate cells or their organelles and then determine their biologic and biochemical activity.^{8, 22-25} Focal spot lesions 1.5 microns in diameter have been obtained. Saks and Roth²⁵ were able selectively to burn small holes in the cell walls of algae as well as selectively to destroy the chloroplast helix. Malt^{8, 23} has used this method to destroy parts of cells such as mitochondria and nucleoli. In the studies of Bessis et al^{8, 22} and of Fine et al⁸ red blood cells were selectively destroyed by the laser beam followed by the uninjured leukocytes engulfing

the dead red blood cells. Radiation of a portion of the cytoplasm of some protozoa resulted in expulsion of this part by the organism with reorganization of its cytoplasm so as to continue its usual activities. Certain organelles take up specific stains, and this allows greater absorption of the laser beam with greater selective destruction. Rounds, Pomerat, and Chamberlain^{8, 24} demonstrated that in cell culture natural pigmentation or dye-staining made these cells more susceptible to the lethal effects of small doses of laser radiation. If a vital dye such as Janus green is used before radiation less laser energy is needed to destroy the cell. Curiously, if the Janus green is given after the ruby laser radiation to the cell culture, the cells then appear to be sensitized to the previously innocuous dye and die within an hour of staining, whereas the controls with radiation but no dye or with dye but no radiation survive longer.

Some workers are developing the laser beam as a tool for spectroscopic ultramicro-analysis.²⁶ All that is needed is a microgram of tissue (still intact and living) which is vaporized by the laser beam so that the resultant activated atomic gases thus created can be sparked between carbon electrodes. The resulting light emitted from the vaporized sample is relayed to a spectrograph and analyzed for the metallic content.

Science has only scratched the surface in laser research. Energy controlled in this form is being extensively studied in the physical and biologic sciences. As physicists and engineers in this specialized field of electro-optics join with the biologist and physician advances in basic knowledge as well as therapeutic and diagnostic developments will be forthcoming.

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Oral Poliovirus Vaccines*

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IN JULY 1964 a Special Advisory Committee on Oral Poliomyelitis Vaccines to the Surgeon General, United States Public Health Service, met to discuss surveillance of poliomyelitis in the United States with particular reference to possible oral vaccine associated cases. The report of the Committee was published in *The Journal of the American Medical Association*.^{1, 2}

The Committee noted that since 1961 approximately 100 million doses of each of the 3 types of oral poliovirus vaccine have been given in the United States. Surveillance by the Epidemiology Branch of the U.S. Public Health Service Communicable Disease Center indicates that a total of 87 cases of paralytic disease following within 30 days of oral vaccination have been reported.³ On the basis of careful sifting of the available epidemiologic, clinical, and laboratory data, 57 of the 87 cases were judged "compatible" with vaccine association, although it was recognized by the Special Advisory Committee that in no single instance was it possible to prove that a given case could be definitely attributed to the vaccine. Nevertheless, certain unusual features of the cases as a group led to the conclusion that at least some of those labeled "compatible" were caused by the vaccine. These features include (1) the preponderance of cases following Type III vaccine while virtually none followed Type II; (2) the predominance of cases in adults, who are known to be more susceptible to the paralytic consequences of infection than are children, and (3) the virtual absence of contact cases.

On the basis of these findings, the Special Advisory Committee recommended "continuation and intensification of the poliomyelitis immunization program throughout the Nation, although with some changes in emphasis." These changes relate primarily to the age groups to be vaccinated, suggested alterations in schedules of administration, and the desirability of increased vigor in organizing and carrying out ongoing immunization programs of infants and young chil-

dren. The importance of such ongoing programs of immunization of infants in the first year of life was reemphasized, and it was urged that all communities which have not already organized such programs do so promptly. Furthermore, any communities which have not yet conducted mass immunization programs were encouraged to do so during the fall and winter of 1964-1965. The target of such community-wide programs should be the immunization of as close as possible to 100 per cent of preschool children; such children constitute the bulk of susceptibles in any community and are in turn the most effective spreaders of wild polioviruses should such be introduced into the area. Because the theoretical very slight risk attending oral vaccination is chiefly to adults, it was recommended that the age limit for vaccination in community programs be approximately 18 years. However, vaccination of young adults was recommended under special circumstances of increased exposure, such as epidemics, entry into military service, or travel to foreign countries.

On the basis of the Report of the Surgeon General's Special Advisory Committee taken in conjunction with all other available pertinent data, the Committee on Control of Infectious Diseases of the American Academy of Pediatrics believes that the use of oral poliovirus vaccine (OPV) continues to be the optimum immunization procedure for the prevention of paralytic poliomyelitis in children. While inactivated vaccine has also proved effective, evaluation of the virtues and limitations of killed and live poliovaccines reveals a clear-cut superiority of the OPV from the point of view of ease of administration, immunogenic effect, protective capacity, and potential for the eradication of poliomyelitis. It is therefore the vaccine of choice for community-wide vaccination programs and for routine immunization in infancy and childhood.

There are no contraindications to oral poliovirus vaccine for infants and children. In the past it has been recommended that the 3 live virus vaccines—oral poliovirus, measles, and vaccinia—be given separately at intervals of at least

* This article is extracted from the monthly newsletter of the American Academy of Pediatrics.

1 month. There is now evidence⁴ that safe and satisfactory immunization with vaccinia and oral poliovirus vaccine may be achieved when the 2 vaccines are given at the same time, but until further data are available measles and oral poliovirus vaccine should continue to be given separately. In order to avoid chance erroneous implication of the oral poliovaccine virus in unrelated subsequent illness and to avoid interference by wild enteroviruses, community programs with OPV should not be held in the natural poliomyelitis season. An exception to this general rule obtains only when epidemic poliomyelitis appears in a community. The latter constitutes an indication for an emergency community-wide immunization program with OPV with the virus type demonstrated to be causing the epidemic. Elective T and A may be scheduled at any time of year in the absence of a poliomyelitis outbreak in communities that have conducted a mass immunization program and in patients who have received OPV.

The Academy Committee suggests the following schedules of immunizations:

1. *Primary immunizations of infants.* Either monovalent or trivalent vaccines may be used. In either case the schedule may be integrated with DTP immunizations, with the first dose to be given at approximately 2 months of age. If monovalent vaccines are used they should be given in the order Type I, Type III, Type II at 6- to 8-week intervals. If trivalent vaccine is given, 3 doses are recommended. Whether monovalent or trivalent is used in the primary course, a fourth dose, consisting of trivalent vaccine, should be given to infants at 12 to 15 months of age.

2. *Primary immunization of other preschool children.* The procedure may conform to that outlined for infants with the exception that the fourth dose may be omitted; or the primary course may consist of 2 doses at 6- to 8-week intervals followed by a third dose approximately 1 year later.

3. *Primary immunization of all others up to and through 18 years of age.* If monovalent vaccines are used they should be given in the order Type I, Type III, Type II. If trivalent vaccine is given, 2 doses 6 to 8 weeks apart are satisfactory.

4. *Immunization of all children on entering school.* A single dose of trivalent vaccine is recommended on entrance to school for all children who have previously been immunized with OPV. This is designed to fill in any antibody gaps resulting from the occasional failure to achieve a vaccine take with 1 or another type during the primary course of immunization. If the child has never received oral vaccine a full course of monovalent or trivalent vaccine should be given.

5. *Procedure for partially immunized children.* Oral vaccine may be ineffective if the complete series is not given. Persons who have had a partial or complete series of inactivated vaccine when given OPV should receive a complete series of OPV vaccine virus in either monovalent or trivalent form, as outlined above. After the full series of OPV has been completed no further injections of inactivated vaccine need be given.

6. *Immunization in the presence of an epidemic.* The virus type responsible should be identified and the corresponding monovalent vaccine offered on a community-wide basis as quickly as possible. All age groups from 2 months up should be included.

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Renal Arteriovenous Fistula—A Problem of Increasing Clinical Importance

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THE FIRST CLINICAL CASE of renal arteriovenous fistula was reported in 1928.¹ During the next 25 years only 7 more cases were reported.²⁻⁸ In the 11-year period, 1954-1964, 58 additional cases have been reported, indicating an increasing clinical importance of this lesion.

Arteriovenous fistula of the renal vessels is known to occur in patients following nephrectomy, which some authors ascribe to en masse ligation of the renal pedicle. In these patients the characteristic hemodynamic changes of systemic A-V fistula develop, often leading to cardiomegaly and heart failure. Although a continuous murmur with systolic accentuation can usually be heard in the region of the nephrectomy scar, these cases not infrequently remain undiagnosed until heart failure becomes evident.

Renal A-V fistula also occurs in patients with intact kidneys. Many of these patients develop systemic hypertension, cardiomegaly and heart failure, but the low diastolic, wide pulse-pressure, and high-output syndrome of systemic A-V fistula does not develop.

The lesion in the presence of an intact kidney may develop following penetrating or nonpenetrating trauma in the kidney area, as a result of ruptured renal artery aneurysm; following surgical procedures, such as nephrolithotomy and subtotal excision of the kidney; or, as a part of congenital arteriovenous malformation of the renal vessels. More recently, renal A-V fistula has been reported following percutaneous renal biopsy.^{9, 10}

The purpose of this paper is to present a case of renal A-V fistula, congenital in origin, probably of unusual embryologic derivation. In addition we have reviewed the literature on the general problem of renal arteriovenous fistula.

Report of Case

The patient, a 59-year-old electrician, was seen in September, 1964 because of hypertension. Two months earlier his wife of about 1 year had discovered a purring mass in his left flank. He deferred consulting a physician in spite of her urging because he was asymptomatic. His physician confirmed the presence of a mass in the left flank, which he thought might be an aneurysm of the renal artery, possibly related to the hypertension. The patient was admitted to the hospital for definitive diagnosis and therapy.

A review of organ symptoms was negative. The patient denied shortness of breath, precordial pain, and ankle edema. The family history was not remarkable except for 1 brother who died of a cerebrovascular accident. Examination showed a middle-aged man in no distress who did not appear chronically ill. The jugular veins were not distended, although the superficial scalp veins were prominent. The heart was enlarged to the left anterior axillary line, sixth intercostal space. The rhythm was regular. There was a prominent left ventricular heave. A grade 2 over 6 ejection murmur was heard at the base of the heart and a grade 4 over 6 systolic murmur heard near the apex. The lung fields were clear. A continuous thrill was palpable in the left upper quadrant about 2 inches to the left of the umbilicus. A mass was palpable in this area, the lower border of which extended down just below the level of the umbilicus. A continuous murmur with intense systolic accentuation was heard maximally over the mass but was widely transmitted to the left lower chest anteriorly and posteriorly, to the left flank, and to the buttocks bilaterally.

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The arterial pulses showed a collapsing quality. The oscillographic indices of the extremities were normal. The blood pressure measurements are presented later. The electrocardiogram showed evidence of left ventricular hypertrophy. Serial chest X-ray films showing cardiomegaly preoperatively, with reduction in size postoperatively, are seen in figure 1. The laboratory

The arterial supply to the kidney was not identified in any exposures of the arteriograms. Pyelograms prior to and during the arteriographic studies demonstrated a malrotation of the kidney, the renal pelvis facing anteriorly, at right angle to the normal adult position.

On exploratory laparotomy, November 16, 1964, the

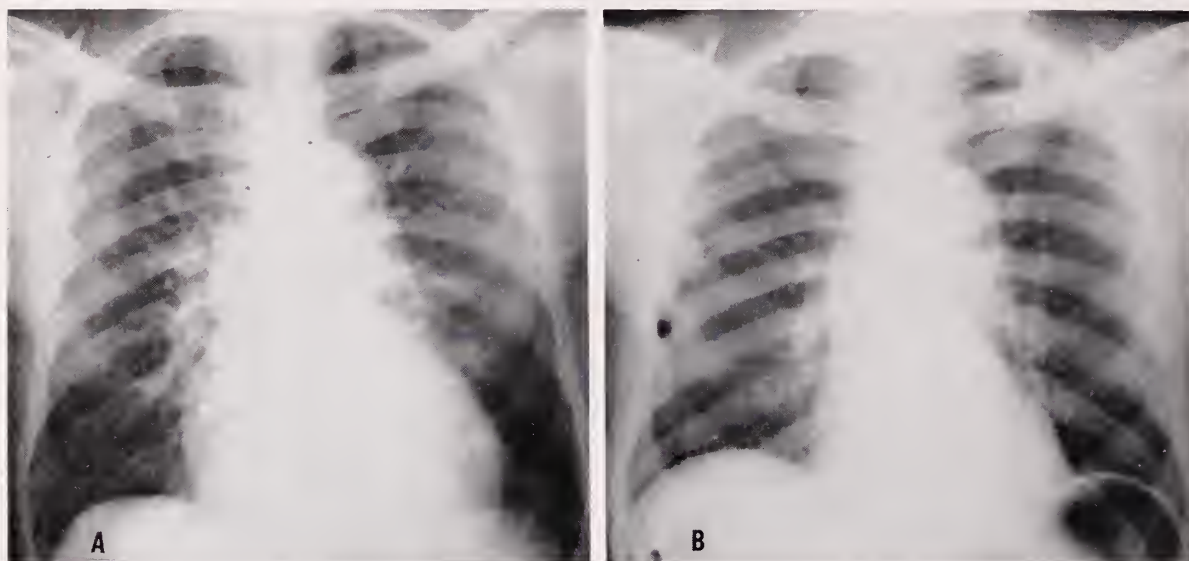


FIG. 1. (A) Preoperative and (B) 3-month postoperative chest films revealing decrease in cardiac size.

data included: urine, numerous red blood cells (microscopic); blood urea nitrogen, 23 mg. per 100 ml.; total bilirubin, 2.08 mg.; cholesterol, 236 mg.; serum sodium, 130 mEq. per liter; serum potassium, 3.2 mEq. per liter.

The hemogram was normal. The cephalin flocculation and serologic tests for syphilis were negative. A variety of special studies were done including renal scan, renal arteriogram, inferior vena cavogram, phonocardiogram, retrograde aortogram, and right heart catheterization. The renal scan showed no diagnostic changes.

The hemodynamic findings are listed as follows:

Cardiac output	12.86 L/min.
Cardiac index	6.70 L/min./M ²
Arterial O ₂	16.26 vol. per cent—96 per cent saturation
Mixed venous blood	14.23 vol. per cent—84 per cent saturation
Right ventricular pressure	45/2 mm. Hg
Pulmonary artery pressure	44/18 mm. Hg
Brachial artery pressure	186/72 (105) mean mm. Hg
Pulmonary wedge pressure	16 mm. Hg

The arteriogram demonstrating the A-V fistula is presented in figure 2. The arterial limb consisted of a vessel, $1\frac{1}{2}$ times the diameter of the aorta at the renal artery level. This vessel coursed upward to the superior pole of the kidney, then downward along the lateral border to the inferior pole where the communication with the venous segment of the fistula was thought to be located.

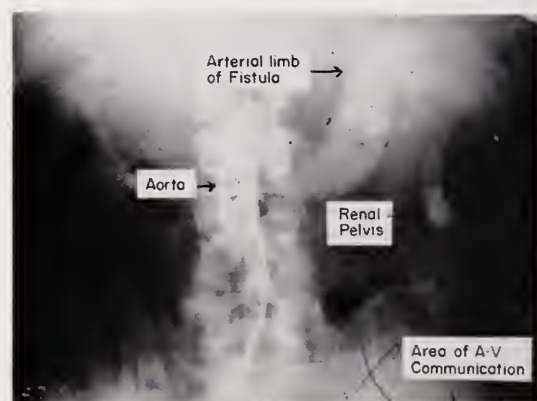


FIG. 2. Retrograde aortogram and renal arteriogram. Note huge arterial limb of fistula rising to superior pole of kidney, coursing down lateral border to inferior pole, the site of A-V connection. A large venous channel follows arterial limb backward to reach inferior vena cava.

presence of the large arteriovenous fistula was confirmed. A nephrectomy was done because it appeared impractical to attempt to salvage any part of the kidney. The blood pressure postoperatively was 140/80. During the second postoperative week the patient developed abdominal symptoms suggestive of intestinal obstruction with corresponding X-ray findings. On November 30, 1964 exploratory laparotomy disclosed a volvulus of the ileum about an adhesive band which was corrected, following which the patient's recovery was uneventful.

The A-V fistula in this patient was considered to be congenital in origin, probably related to faulty involution of the embryonal mesonephric vessels. A composite reconstruction of the anomaly from the arteriogram, operative photographs, and the excised specimen is presented in figure 3. It is to be noted that there are 2 small arteries originating from the proximal segment of the arterial end of the fistula, supplying the upper $\frac{2}{3}$ of the kidney, while the lower $\frac{1}{3}$ was supplied by another smaller artery from this arterial channel as it coursed toward the lower pole.

Follow-up studies 3 months postoperatively showed the patient to be in excellent health. The chest X-ray film showed a reduction in heart size with some cardiomegaly still present (figure 1). The blood pressure measurements preoperatively and 3 months postoperatively were as follows:

PERIOD	S/D	MEAN
8/30/64	220/110	147
10/6/64	160/60	93
11/2/64	190/80	116
11/16/64	Nephrectomy	
1/6/65	132/82	99
2/3/65	150/110	123

Review of Literature and Discussion

The increasing clinical importance of renal A-V fistula is evidenced by the large number of cases reported in the last 11 years. Few investigators have had personal experience with more than 1 case. Recently, one group of investigators⁹ reported 5 cases discovered in a 3-year period. They attribute the discovery of this number of cases in so short a period not to chance but to 2 features regularly used in their clinic: first, the careful use of percutaneous renal angiography, especially selective, and second, the employment of a broader range of indications for renal angiography, including abnormal urographic outline of the renal pelvis, poorly functioning unilateral kidney, bruits and thrills in the kidney area, and hematuria of unknown etiology, often spoken of as essential hematuria. Such a program if adopted would result in more widespread early recognition of renal A-V fistula. If the selective method were employed, anatomic data with reference to segmental arterial distribution would be provided which might be of value in planning operative procedures on the kidney.

Most of the proposed classifications of renal A-V fistula have been attempted from an etiologic point of view. Difficulty has been encountered in a variety of ways: the certainty of cases labeled as congenital; the etiologic significance of associated severe inflammation in the region of the intrarenal A-V fistula; and the role of small asymptomatic renal artery aneurysm with venous

erosion in the pathogenesis of renal A-V fistula. One suspects that this last mechanism may be more common in renal A-V fistula formation than is reflected in the literature, since renal artery aneurysm at autopsy is not an uncommon lesion.¹¹

We have used a classification based on the absence or presence of the homolateral kidney, and, if the latter, whether the fistula is intrarenal or extrarenal. The 67 cases reported in the literature are tabulated accordingly in table 1. It is notable that $\frac{3}{4}$ of the reported cases were in association with an intact homolateral kidney.

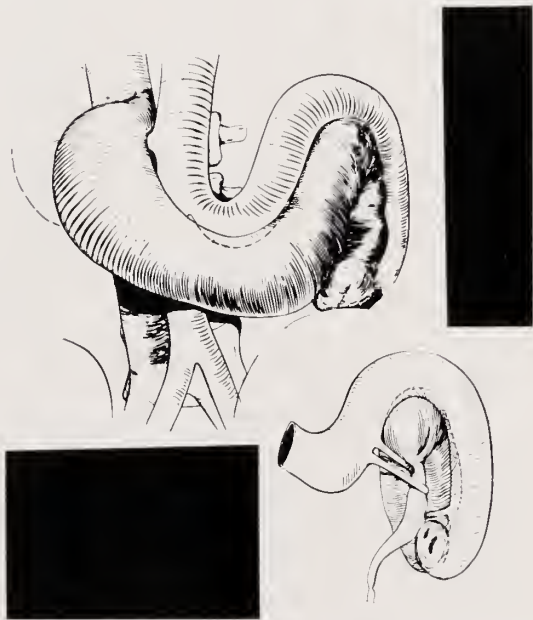


FIG. 3. Composite drawings of A-V fistula and malrotated kidney as reconstructed from renal arteriogram and surgical specimen. Inset shows 3 vessels giving arterial blood supply for kidney.

The report of 4 cases of fistula following percutaneous renal biopsy may be of considerable practical importance. Two of these cases, reported by Blake et al,¹⁰ represent 3 per cent of 62 consecutive renal biopsies. All 4 cases occurred in hypertensive patients. It has been suggested that the combination of hypertension and renal atherosclerosis may predispose to A-V fistula formation following percutaneous renal biopsy.⁹ In view of these experiences and the current extensive use of percutaneous renal biopsy, it seems important that a systematic search for A-V fistula complication be made a part of the follow-up in patients undergoing this procedure, especially those with hypertension. In a review of 500 cases of percutaneous renal biopsies by one group of investigators⁵⁹ no mention was made of A-V fistula as a complication nor of special follow-up

TABLE 1: Arteriovenous Fistula of Renal Vessels as Reported in the Literature

Group	Number	Per cent	References
Arteriovenous fistula with intact kidney	51	76	
Extrarenal	20		
Ruptured renal artery aneurysm	4		1, 12, 13, 14
Accidental trauma	6		2, 15-18
Congenital or idiopathic	6*		3, 19-22
Renal surgery	4		9, 23, 24, 25
Intrarenal	31		
Carcinoma	7		4, 12, 17, 26-29
Percutaneous renal biopsy	4		9, 10
Congenital or idiopathic	17		5, 6, 9, 30-42
Accidental trauma	2		43, 44
Ruptured renal artery aneurysm	1		45
Postnephrectomy arteriovenous fistula	16	24	7, 8, 46-58
TOTAL	67	100	

* Includes case presented here.

search for this lesion. Four cases of practical interest to the urologist were reported in which renal A-V fistula was secondary to nephrolithotomy in which the stones were large, removed with difficulty, and in which considerable trauma may have occurred during the operative procedure.^{9, 23, 24, 25}

The Problem of Hypertension in Renal Arteriovenous Fistula

Characteristically in A-V fistula a considerable fraction of the volume flow of blood is diverted from tissue-perfusing arterioles distal to the fistula into a low-resistance venous short circuit, resulting in relative ischemia of distal tissues.^{60, 61, 62} Also, experimentally it has been shown that a reduction in pulse pressure occurs distal to induced A-V fistula. In renal A-V fistula with intact kidney the distal tissue is renal. Such patients might therefore be expected to develop hypertension since 2 factors considered important in its genesis may be present.

Data on blood pressure prior to fistula excision were given in 41 of the reported cases, 32 of which had postexcision blood pressure data as well. Preexcision hypertension occurred in only 1/4 of the postnephrectomy A-V fistula cases as against more than 2/3 of the intact kidney A-V

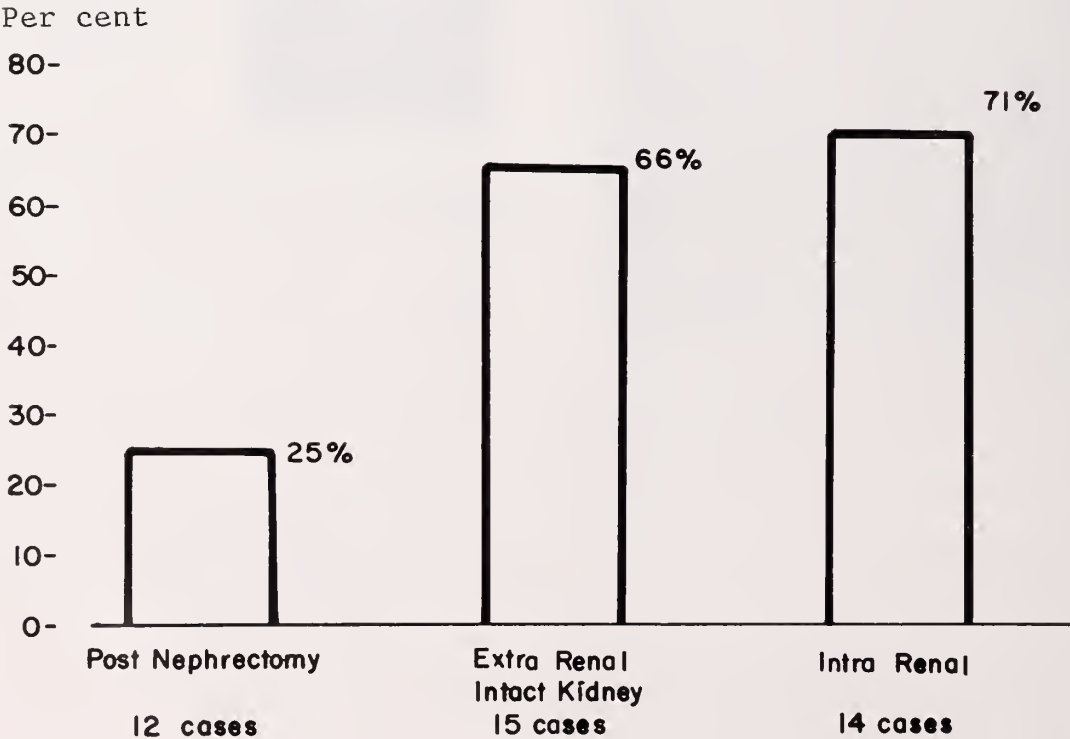


FIG. 4. Hypertension* at time of A-V fistula diagnosis.

* Mean pressure > 110 mm. Hg.

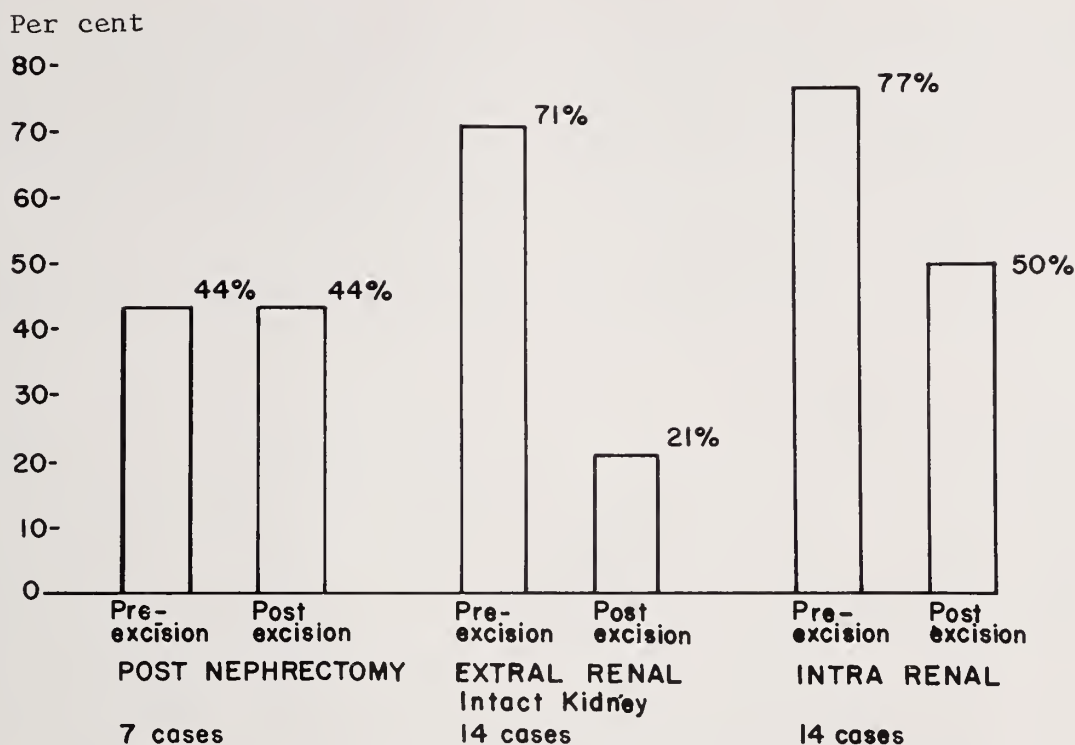


FIG. 5. Hypertension* before and after fistula excision.

* Mean pressure > 110 mm. Hg.

fistula groups (figure 4). Figure 5 shows the behavior of the blood pressure in the 32 cases with pre- and postfistula excision blood-pressure data. The percentage of patients with hypertension was unchanged in the postnephrectomy group but was reduced in the intact renal group, the most significant reduction being in the extra-renal subgroup. These observations are consistent with the thesis that renal A-V fistula with intact kidney results in systemic hypertension.⁴³ The individual postfistula excision blood pressure changes are presented in figure 6. In each of the 3 groups at least 1 patient, previously normotensive, became hypertensive following fistula excision. It has been postulated that the presence of systemic A-V fistula may actually mask an underlying hypertension in some patients.⁵⁷

One set of experimental studies is often referred to with reference to the problem of renal A-V fistula and hypertension.⁶³ These experiments, however, are not comparable to renal A-V fistula in man in that they are of short term; the animals which developed hypertension died in uremia between the third and thirteenth post-operative day; and the animals which did not develop uremia did not become hypertensive.

Data on the presence or absence of hematuria

were given in 30 of the 51 reported cases of renal A-V fistula with intact kidney. Nineteen were found to have hematuria and 11 had no hematuria, thus again emphasizing the importance of renal arteriography in patients with unexplained hematuria.

Summary and Conclusions

A patient with renal A-V fistula has been presented, making a total of 67 cases reported since 1928. The case is remarkable in that the arterial limb of the fistula was larger in cross-sectional diameter than the aorta at that level; and the fistula was associated with malrotation of the kidney, whose blood supply came from 3 branches derived from this arterial limb. The origin of the fistula appears to be related to a faulty involution of the mesonephric vessels.

Renal arteriovenous fistula is a problem of increasing clinical importance. Fifty-eight cases were reported during the past 11 years while only 7 cases were reported during the preceding 25 years. Postnephrectomy A-V fistula may result in high-output failure as in any systemic A-V fistula. In the presence of an intact kidney, however, renal A-V fistula can be expected to result in varying degrees of renal ischemia with

narrowed pulse pressure in the kidney, thus predisposing to systemic hypertension.

A review of the 41 cases in which blood pressure data are reported shows that more than $\frac{2}{3}$ of the renal A-V fistula cases with intact kidney developed systemic hypertension (mean pressure greater than 110 mm. Hg), while only $\frac{1}{4}$ of the postnephrectomy A-V fistula cases had hypertension. The percentage of patients with persisting hypertension was unchanged in the latter, while that of the former was distinctly reduced.

difficulty also appear more susceptible to the A-V fistula complication.

5. Given a high index of suspicion and the use of renal arteriography with a wider range of indications, renal A-V fistula can be discovered early, prior to the development of heart failure or permanent hypertension.

We are indebted to Dr. Keith Cassells for referring this patient and for follow-up reports on the patient's clinical status.

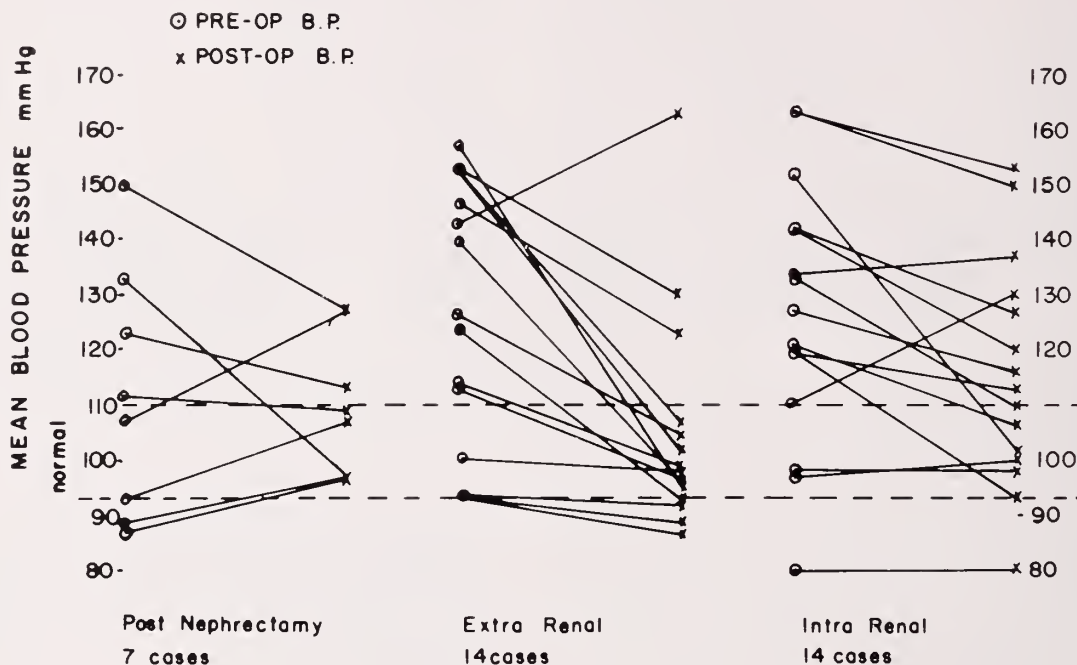


FIG. 6. Blood pressure changes with A-V fistula excision.

Several matters of practical concern are evident from this study:

1. In addition to the classical signs of thrills, bruit and masses in the diagnosis of renal A-V fistula, renal arteriography, especially selective, is an important tool for the definitive diagnosis of this lesion.

2. The indications for renal arteriography should be expanded to include the hematurias of unknown cause.

3. Percutaneous renal biopsy may result in renal A-V fistula in as much as 3 per cent of cases with biopsy. Hypertensive subjects appear to be especially predisposed to this complication. Careful follow-up studies with reference to the development of this complication would appear warranted in patients undergoing percutaneous renal biopsy.

4. Patients undergoing nephrolithotomy in which large irregular stones are removed with

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Adenoidectomy: Indications and Technique in Otologic Disease

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ALTHOUGH ADENOTONSILLECTOMY is one of the most frequently performed surgical procedures, it continues to be the subject of much controversy among practitioners in several fields of medicine. This is largely due to the fact that no really adequate explanation of the physiology of the tonsils and adenoids has been made. Indiscriminate and carelessly performed surgical removal of these structures, even to the present time, has resulted in a tendency toward condemnation of adenotonsillectomy by some members of the laity and the medical profession alike. It is unfortunate that this attitude has interfered with a better understanding of the indications for one specific part of this surgery—adenoidectomy. Whereas the decision to perform tonsillectomy is often arbitrarily made, the otologic indications for adenoidectomy are well defined. It is the purpose of this paper to discuss the relationship of adenoid hypertrophy to ear disease and to emphasize the need for careful and complete surgical removal in these instances.

Indications

Nasopharyngeal lymphoid tissue develops rapidly in the first year of life and persists until the age of 10 or 12 when its size begins to decrease. It is during this period that middle-ear infections are most common. The role of the adenoids in the etiology of middle-ear disease is generally undisputed. In some instances their size alone interferes with normal function of the eustachian tubes, preventing adequate aeration of the middle ear and equalization of the air pressure on both sides of the ear drum. As a source of chronic infection the adenoids may contribute directly to middle-ear disease via the eustachian tubes or may produce middle-ear infection indirectly by maintaining a constant state of tubal edema. Of particular importance are the fossae of Rosenmüller adjacent to the openings of the eustachian tubes in the lateral portion of the nasopharynx. It is here that even small amounts of adenoid

tissue are of great importance, and, unfortunately, it is this adenoid tissue that is neglected in the techniques employed by many surgeons.

The specific otologic indications for adenoidectomy are:

1. Recurrent acute suppurative otitis media. Two or more episodes of acute otitis media indicate the need for adenoidectomy. Kos¹ has stated that the incidence of permanent irreversible damage due to acute infections is 10 per cent. Chronic perforations of the tympanic membrane, necrosis of the middle-ear ossicles, and adhesions of the middle ear are among the common effects of acute suppurative otitis media. With each successive ear infection the risk of permanent damage increases. Approximately 85 per cent of patients having adenoidectomy for recurrent otitis media have no further attacks, and the remaining 15 per cent generally have less frequent and less severe attacks than prior to surgery.

2. Chronic secretory otitis media. Also called "glue ear" because of the thick gelatinous material found in the middle ear, this condition is the commonest cause of hearing loss in children. Because the physical findings are usually subtle, chronic secretory otitis media often goes unrecognized by the physician. The tympanic membrane has a dull, thickened appearance with fine blood vessels radiating inward from the periphery of the membrane. Slight retraction is often present. In many instances there is no definite history of previous ear infections, and the child is brought to the physician because the parents or teacher suspected hearing loss, or a routine school audiogram established the presence of a loss. Adenoidectomy combined with myringotomy and aspiration of the gelatinous material from the middle-ear space is mandatory in this condition.

3. Acute mastoiditis. Much less common today than in the pre-antibiotic era, this is one of the serious complications of acute suppurative otitis media. After subsidence of the acute mastoid infection, either through medical or surgical treatment, adenoidectomy should be done to decrease

the risk of further ear infections and their possible complications.

4. Chronic suppurative otitis media. Chronic infections of the middle ear with central perforations of the tympanic membrane generally do not respond to therapy as long as nasopharyngeal adenoid tissue is present to interfere with the function of the eustachian tubes. When reconstructive surgery of the ear is planned in such patients removal of any existing adenoids is generally necessary to prepare the ear for surgery. The adenoids are not believed to be a part of the etiology of cholesteatoma with marginal perforations of the tympanic membrane, and this disease responds to neither adenoidectomy nor medical treatment.

5. Neurosensory deafness. Adenoidectomy has been recommended as a prophylactic measure in children with neurosensory hearing losses of moderate severity.² This is based on the feeling that the risk accompanying adenoidectomy is far less than the risk of ear infections and a conductive hearing loss superimposed on the already existing neurosensory loss. I agree generally with this approach but think that each case must be managed on the basis of individual factors.

When adenoidectomy is performed for otologic reasons the age of the child is of little significance. It is sometimes necessary to do adenoidectomy on children under 1 year of age, although the likelihood of continued ear infections is much greater in patients who begin to develop otitis prior to the age of 6 months regardless of the thoroughness of treatment. When adenoidectomy is performed on children under the age of 3, recurrence of the adenoid tissue is common, and the parents should be so informed.

Allergy and sinusitis are frequent contributing causes of middle-ear disease, and their treatment should be a part of the regimen which includes adenoidectomy. When the history or physical examination suggests the presence of allergy, skin tests are done and hyposensitization treatment is begun prior to adenoidectomy. Dust and mold spores are the common offending allergens. If allergy is present and treatment is neglected, resolution of the ear disease is unlikely and recurrence of the adenoid tissue is enhanced. When sinusitis is a contributing cause of the ear disease, irrigation of the sinuses is carried out at the time of adenoidectomy.

If the child is over the age of 3 and there are indications for tonsillectomy, it is carried out at the same time as adenoidectomy. The tonsils, however, are of little if any importance in the etiology of ear disease.

Technique

Unfortunately, adenoidectomy is too frequently regarded merely as an adjunct to tonsillectomy and is performed hurriedly and blindly with tags of adenoid tissue left in the superior nasopharynx or the fossae of Rosenmüller. In some instances injury to the eustachian tube results in ear disease where none existed prior to surgery. Adenoidectomy in the management of otologic disease requires complete and careful removal of the nasopharyngeal lymphoid tissue under proper visualization. Since 1957 I have



Fig. 2. Marked osteolytic destruction of the jaw. patient are shown. Use of Crowe-Davis mouth gag, which is supported by instrument stand, enhances visualization of surgical field.

used the technique advocated by Obregon³ and concur with him in his criticism of the use of the adenotome for the reason that the variations in the configuration of the nasopharynx are so great that no single instrument fits any individual patient. The use of the Barnhill and Jones adenoid curettes and the Meltzer punch forceps is preferable.

General anesthesia is administered by insufflation or orotracheal intubation at the discretion of the anesthesiologist. In older children and adults intubation is necessary to maintain a proper anesthetic concentration and interferes little with the surgical technique. A Crowe-Davis

mouth gag which has a tongue depressor as an integral part of the instrument is used for exposure. The patient is placed in the Rose (head low) position, reducing the danger of aspiration of blood. The surgeon is seated at the head of the patient and wears an electric headlight for illumination (figure 1).

A vital part of the technique of adenoidectomy in otologic disease is the visualization of the nasopharynx before, during, and after removal of the adenoids. This enables complete removal of the adenoids while avoiding injury to the eustachian tubes and allows the surgeon to determine that hemostasis is satisfactory before concluding the procedure. For this purpose a no. 4 laryngeal mirror previously warmed in hot sterile saline solution is used (figure 2). The palate is retracted with the Yankauer suction tube or the adenoid curette. Although the image obtained with the mirror is inverted, the surgeon readily adjusts to this without difficulty.

The main mass of midline adenoid tissue is removed with 2 or 3 strokes of the Barnhill curettes. The narrower Jones curettes, which come in 3 sizes, are then used to remove the lateral adenoid tissue in the fossae of Rosenmüller. The use of the mirror facilitates placement and manipulation of the curette in order to avoid injury to the eustachian tube. Any small remnants of adenoid tissue are then removed with the Meltzer punch forceps. Hemostasis is obtained by temporarily packing the nasopharynx, and if tonsillectomy is to be done it is carried out while the pack is in place. Persistent oozing from the nasopharynx is usually due to incomplete removal of the adenoids. Rarely is it necessary to leave a postnasal pack in place for 24 to 48 hours. When this is done prophylactic antibiotics should be given and the patient kept in the hospital until the packing is removed.



FIG. 2. The mirror is used to visualize adenoid tissue and structures of nasopharynx while the palate is retracted with adenoid curette. In rare instances in which greater retraction is needed a small rubber catheter can be passed through the nose, brought through the mouth, and the 2 ends tied together to hold the soft palate anteriorly.

Summary

The surgical removal of the adenoids is indicated in patients with recurrent acute suppurative otitis media, chronic secretory otitis media, chronic suppurative otitis media with central perforations of the tympanic membrane, recent acute mastoiditis, and in some children with moderate neurosensory deafness. Treatment of sinusitis or allergy, when present, should also be a part of the therapeutic regimen, which includes adenoidectomy. Proper visualization of the nasopharynx is essential to adequate adenoidectomy, and the use of adenoid curettes and punch forceps is preferable to the adenotome.

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Carcinoma of the Prostate with Metastases to the Jaw*

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CARCINOMA OF THE PROSTATE is one of the most common tumors found in man. Its incidence is usually accepted as between 10 and 20 per cent of all malignant tumors in adult males.¹

Due to the rising longevity of the male population and the growing awareness on the part of the medical profession, the diagnosis is being made more frequently, and an increasing number of unusual manifestations are being discovered. It is the purpose of this paper to report a case of carcinoma of the prostate with the unusual complication of mandibular metastases.

Report of Case

A 59-year-old Negro was admitted to D. C. General Hospital for the fourth time on April 17, 1964 because of a long history of back pain.

On April 29, 1963 the patient was hospitalized for the first time with hip and back pain of 3 months' duration. Cystoscopy and needle biopsy of the prostate gland revealed adenocarcinoma. This was followed by a mild bleeding problem which appeared to be corrected with the administration of epsilon-aminocaproic acid. Additional studies revealed the platelet count to be 32,000/mm.³, the hematocrit 25 per cent, and the fibrinogen level "decreased." Bone marrow examination was normal. The patient was started on diethylstilbestrol, 5 mg. daily, and discharged to the Urology Clinic.

Three months later he was readmitted with congestive heart failure due to an acute myocardial infarction. He responded well to standard therapy in-



FIG. 1. Extensive osteoblastic metastases of the pelvis and vertebrae.

cluding digoxin, hydrochlorothiazide, and heparin. He was discharged to be followed in the Oncology Clinic.

On March 13, 1964 he was once again readmitted to the hospital because of the recurrence of his back pain. X-ray films revealed osteoblastic metastases to the bony thorax, pelvis and lumbar vertebrae (figure 1). A bilateral orchiectomy was performed. The postoperative course was uneventful.

On April 17, 1964 the patient was admitted for the

* From a study supported in part by Grant CA-02824 from the National Cancer Institute, National Institutes of Health, Public Health Service, United States Department of Health, Education, and Welfare.

last time with severe back pain in the upper lumbar area radiating to the abdomen and thighs.

The family history was unknown. The patient was a junkman who smoked and drank moderately.

He was a normally developed, paraplegic, poorly nourished Negro in no apparent distress. The head was normocephalic. The conjunctivae were pale; the sclerae were muddy; the pupils were equal and reacted to light. There was some hearing loss. Oral hygiene was poor but there were no lesions seen in the buccal cavity. The throat showed no congestion or exudates.

There was tenderness over the lower rib cage posteriorly. Tenderness was also elicited over the lumbar vertebrae. Gynecomastia was noted. The lungs were negative. The heart seemed to be slightly enlarged with the point of maximal impulse in the fifth interspace about 2 cm. lateral to the left midclavicular line. The rate was 86 beats per minute and the rhythm was irregular. No murmurs were audible.

Abdominal examination revealed voluntary guarding, palpable liver edge in the epigastrium, and tenderness in the costovertebral angles. The external genitalia were slightly atrophic, with a draining fistula over the right scrotum. The prostate was enlarged and nodular.

Urinalysis revealed numerous erythrocytes and leukocytes, and a culture showed *Aerobacter* species and coliform intermediate, less than 10,000 organisms per ml. The hematocrit was 33 per cent. The white blood cell count was 11,800/mm³. Differential counts showed 85 per cent polymorphonuclear cells, 13 per cent lymphocytes, and 2 per cent monocytes. The blood urea nitrogen was 10 mg. Thymol turbidity was 7.9 units. Alkaline phosphatase was 15.2 units and acid phosphatase 13.6 units (Bodansky). Total protein was 6.5 Gm. with an A/G ratio of 3.0/3.5. SGOT was 69 units. Serum sodium was 139, potassium 3.8, chloride 103 and CO₂ 24 mEq/L.

The electrocardiogram revealed changes consistent with digitalis effect and possible ischemia. The chest X-ray film showed some evidence of left ventricular hypertrophy. X-ray films of the vertebrae and pelvis revealed widespread osteoblastic and osteolytic metastases. Myelography revealed obstruction at T₁₀ and L₂. An intravenous pyelogram was normal except for some suggestion of an enlarged prostate gland.

The patient received narcotics for relief of the severe back pain and 2,400 rads of X-ray therapy over the lumbar spine which resulted in partial relief of pain, but the paraplegia progressed. A decompressive procedure was considered. This was not done, however, due to the extensive metastases.

Physical therapy was administered with no improvement. The patient was sent to a nursing home. Five weeks after discharge he was again seen in the Oncology Clinic complaining of swelling of the right jaw of 3 weeks' duration. He had occasional gum bleeding during this time.

The right cheek was swollen. A 5 by 3 by 3 cm. mass was noted in the right mandibular molar area with a loose molar tooth. X-ray films revealed an extensive osteolytic mottling of the right mandible

(figure 2). A gum biopsy confirmed the presence of metastatic adenocarcinoma in the jaw.

The patient died at home. The manner of death was unknown. No autopsy was performed.

Comment

Metastatic carcinoma to the jaws, especially from the prostate gland, rarely occurs. In 1935 Graves and Militzer² reported 81 cases of prostatic carcinoma with bone metastases. In all but 6 patients metastases to the bones were demonstrated either by roentgenogram or postmortem examination. The bones most frequently involved



FIG. 2. Marked osteolytic destruction of the jaw.

were the pelvis and sacrum, 85.1 per cent; lumbar spine, 59.2 per cent; femur, 24.8 per cent; thoracic spine, 23.4 per cent; and ribs, 22.2 per cent. The skull, cervical spine and humeri were rarely involved. There were no mandibular metastases noted. It is possible, however, that these cases could have been missed if there were no accompanying signs and symptoms.

Clausen and Poulsen³ reviewed the literature from 1884 to 1961 and collected 97 cases of metastatic carcinoma involving the mandible. The most frequent accompanying signs and symptoms were swelling, pain and anesthesia. The neoplasms most frequently associated with these metastases were carcinomas of the breast (30 cases), lung (17 cases), and kidney (15 cases).

(Continued on page 402)

Q Fever

Report of a Case

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Q FEVER is an acute systemic febrile illness caused by the rickettsial organism *Coxiella burnetii*. In the less than 3 decades since it was first described as an esoteric medical curiosity, Q fever has become recognized as an infectious disease of world-wide distribution which parasitizes many species of ticks, small and large mammals, and man. Infection in man occurs in a variety of epidemiologic settings; the basic acquisition of infection is usually by the inhalation of infected aerosols. During recent years there has been an increasing awareness of the spreading enzootic foci within the continental United States associated primarily with infection in dairy cattle.^{1, 2} The purpose of this article is to call attention to a recent case of Q fever which occurred in a residential Maryland suburb of Washington, D.C. The mode of infection in this case was not associated with any of the epidemiologic patterns involved among cases that have been previously described in that area.

Report of Case

The patient was a 46-year-old radio engineer who was admitted to the Holy Cross Hospital of Silver Spring, Maryland on May 8, 1963 with the chief complaint of chills and fever of 3 days' duration. The patient had returned April 12, 1963 from a trip to California. The present illness began with malaise on May 5, 1963 followed by generalized musculoskeletal aching and the development of fever. The following day the fever continued at 100° to 101°F and was accompanied by intermittent shaking chills. The day prior to admission there was a mild sore throat, but the patient felt more comfortable than on the previous day. Sulfadimethoxine (Madribon®) was started orally. The day of admission to the hospital his temperature rose to 104°F with marked chilling. No other prehospitalization symptoms were elicited.

Past history, family history, and review of systems disclosed no relevant information.

The patient was a well-developed, well-nourished white man who appeared acutely but not critically ill. The temperature was 102.8°F (rectal), the pulse

rate 100 per minute, the respiratory rate 20 per minute, and the blood pressure 140/80. No diagnostic abnormalities were noted on physical examination. Mild hyperemia of the oropharyngeal mucosa was present. The lungs were clear to percussion and auscultation.

The urinalysis was within normal limits. The hemoglobin was 16 to 18 Gm. per 100 ml. The hematocrit was 45 to 47 per cent. Erythrocyte sedimentation rate was 21 mm. per hour (Wintrobe method). White blood cell counts ranged from 4,800 to 6,000 with normal differential counts. The VDRL test was nonreactive. Cultures of stool, blood, and urine were negative on several occasions. Blood smears for malaria parasites were negative. The serum titer for cold agglutinins was 1 to 4. Examinations for serum agglutinins against typhoid O, *Brucella abortus*, *P. tularensis*, *Proteus OX 2* and *OX 19* showed no titer. Serum agglutinin titers for typhoid H was 1 to 20 and for *Proteus OXK* was 1 to 40. Acute and convalescent phase serums tested for antibodies against psittacosis, leptospirosis, histoplasmosis, coccidioidomycosis, and blastomycosis showed no titer. Histoplasmin, coccidioidin, and intermediate strength PPD (tuberculin) skin tests were negative.

Acute and convalescent phase serums showed a rising titer of complement-fixing antibodies for *Coxiella burnetii*. The results are shown in table 1.

TABLE 1: Rising Titer of Patient's Complement-fixation Antibodies, Diagnostic for Infection with *Coxiella burnetii*

Date	Time Following Onset of Illness	Complement-fixation Titer Against <i>C. burnetii</i> *
May 8, 1963	3 days	No titer†
May 16, 1963	11 days	1:8†
June 1, 1963	26 days	>1:16, 384†
June 5, 1964	13 months	1:64‡

* The complement-fixation antigen used in all tests was the Nine Mile Strain of *C. burnetii*,⁴ from Lederle Laboratories, Pearl River, New York.

† Performed in the serology laboratory of Washington Hospital Center, Washington, D.C.

‡ Performed in the serology unit, Laboratory of Infectious Diseases, National Institutes of Health, Bethesda, Maryland through the kindness of Dr. Robert J. Huebner and Mr. Horace C. Turner.

A 12-lead scalar electrocardiogram was normal. X-ray films of the skull and paranasal sinuses were normal. X-ray films of the chest on May 8, 1963, May 13, 1963, and May 15, 1963 were similar and showed no change from films taken several months before and 1 year after the acute illness. The interpretation was early pulmonary emphysema with minimal chronic bronchitic change. The pulmonary artery segment was prominent.

The patient continued having remittent fever accompanied by chills with temperature elevations ranging up to 103° and 104°F. No diagnostic localizing signs appeared. On May 11, 1963, the fourth hospital day, the patient had severe headache in the right temporoparietal area with circumscribed tenderness and the sensation of a bandlike constriction around the head. Neurologic examination at this time was within normal limits. Treatment was started on May 12, 1963 (fifth hospital day) with chloramphenicol, 1 Gm. intramuscularly every 12 hours until May 18, 1963. The dosage of chloramphenicol was then changed to 250 mg. given orally every 6 hours and continued to discharge on May 22, 1963. The fever continued remittently to May 13, 1963. Defervescence began on May 14, 1963, and the temperature returned to normal the next day, remaining so until discharge. Convalescence was uneventful.

The patient was an aeronautical radio engineer whose occupation required periodic travel to various locations in California where he inspected radionavigational equipment. His most recent trip to California was from March 26, 1963 to April 12, 1963. He arrived in Los Angeles March 27 and spent 1 day in the Los Angeles International Airport area. On March 28 he started the northward leg of his itinerary via U.S. Route 99 through the San Joaquin Valley to Bakersfield, Famoso, Visalia, Merced, Modesto, Stockton and San Francisco. On March 29 he stayed for 8 hours near Famoso at a radio site which was located on a farm; he was not in direct contact with any farm animals. He spent April 1 and 2 in the San Francisco Airport area. On the southward leg of the journey he traveled from San Francisco on State Route 1 to Santa Cruz and San Luis Obispo, then on U.S. Route 101 to Santa Barbara and to Los Angeles, arriving there April 5. He spent April 6 through April 11 in the Los Angeles Airport area with 1 evening excursion to Long Beach. In California he traveled by station wagon containing personal belongings and electronic testing equipment. He was accompanied by 1 male technician. The radio installations were located in sparsely populated areas except near the vicinity of the airports. He stopped overnight in motels in towns and ate his meals in local restaurants. He used no milk.

On his return to Washington, D. C., April 12, 1963, he followed his usual daily routine, commuting between his home in residential suburban Montgomery County, Maryland and his office in the District of Columbia until the onset of his illness. His California

traveling associate had a 3- to 4-day undiagnosed febrile illness several days after the patient returned to Washington, D. C. Neither the patient's wife nor daughter showed signs of sickness during the period when the patient was ill. Following his return from California there was no history of exposure to cattle, sheep, goats, or other domestic animals. He recalls no tick bites. He made no visits to farms, dairies, meat-packing plants, rendering plants, or tanneries, nor did he knowingly have contact with persons whose occupations were in the above industries. He had never worked with wool in the raw state. Pasteurized milk was used in his household. It seems plausible, therefore, that the most likely exposure of this patient to infection with *C. burnetii* was during his recent trip to California, an area known to be highly endemic for Q fever.

Discussion

The recognition of this patient's illness produced several impressions. It appeared that this was an isolated case of Q fever occurring in a nonendemic area. It was postulated that acquisition of infection occurred by traveling to a region where infection and environmental contamination are known to have been prevalent. Several features of the patient's illness would have suggested diagnoses other than Q fever. The absence of compatible pulmonary findings directed attention away initially from the group of illnesses characterized by the appearance of pneumonitis; however, the presence of pneumonitis is not an absolute criterion for making the diagnosis of Q fever, since pulmonary involvement is present in only 50 to 60 per cent of patients with this illness. The history of having traveled through the San Joaquin Valley offered another diagnostic possibility, since coccidioidomycosis rather than Q fever is more popularly associated with that portion of California.

The incubation period for Q fever averages 14 to 28 days, with an upper limit of 32 days and a lower limit of 9 days (for experimental infections). Assuming that infection was not acquired in Maryland, the most likely time of infection was during the period April 6 to April 12, 1963 that the patient spent in the Los Angeles area. If a longer incubation period is postulated he might possibly have become infected several days previously while traveling south from San Francisco.

Early studies in northern and southern California indicated differing epidemiologic patterns in the acquisition of human infections. Huebner and his associates³ showed that abundant infection with *C. burnetii* was present in the milk of

many dairy herds in the Los Angeles area. Human infection and illness were closely associated with dairy work, with residence in close proximity to dairies, with the household use of unpasteurized milk, and with occupation in the cattle-allied industries.^{5, 6} Lennette and his associates⁷⁻¹⁰ found Q fever in northern California to be associated with direct and indirect exposure to sheep and goats. Products of parturition in cattle, goats, and sheep, e.g., placentas and birth fluids, are heavily infested with viable organisms.¹¹⁻¹⁴ *C. burnetii* resists desiccation, heat, and various physical and chemical agents, and it can survive for long periods.^{15, 16, 17} These factors account for the production of heavily contaminated environments and for the prolonged generation of highly infective aerosols in the vicinity where domestic animals have been quartered.^{14, 18} Recent studies¹⁹ have indicated that the prevalence of infection in dairy herds in central and northern California has increased to a high level approximating the continuing almost universal involvement of herds in southern California. This has coincided with the observations that endemic foci of infection with Q fever have appeared among dairy cattle in most states in the continental United States^{1, 2, 19} and with the recognition of sporadic human cases of Q fever in areas where infection in cattle has been newly discovered.

Outbreaks of Q fever have been documented under a variety of circumstances, many of which appeared quite mysterious until detailed epidemiologic studies delineated probable sources of infection. These usually were traceable to exposure to domestic animals, their raw products, and excreta, or to direct or indirect laboratory exposure. Cases have occurred among laundry workers who handled the soiled laboratory garments of persons working with *C. burnetii*²⁰ and among rendering-plant employees who handled infected guinea-pig carcasses obtained from a laboratory where investigation of Q fever was in progress.²¹ Other cases have occurred among wool sorters working with raw wool.²² Epidemics have occurred among slaughter-house^{23, 24} and cattle-yard²⁴ workers. An appreciation of the global distribution of Q fever developed following the outbreak of extensive illness in the Mediterranean Theatre during World War II among units of troops that had common exposure in billets usually in rural environments where domesticated animals had been quartered previously.^{25, 26}

The resistance and persistence of *C. burnetii* thus favor its preservation and enable it to

spread via the air-borne route to cause infection among susceptible persons who are adequately exposed in a variety of epidemiologic situations.

In Montgomery County, Maryland, where the patient in this report lived, most of the documented cases have occurred in epidemics at the National Institutes of Health among persons exposed within the buildings where *C. burnetii* was undergoing experimental manipulation.^{27, 28} These epidemics usually occurred at a time when there was presumably gross contamination of the laboratory environment with large numbers of organisms. During the third epidemic at the National Institutes of Health 2 cases occurred among persons whose only exposure was to one of the laboratory personnel who was working with *C. burnetii* at the time when infections were occurring among persons exposed within the laboratory.²⁹ Presumably the 2 patients not exposed within the laboratory became infected by exposure to a "microenvironment"¹⁰ of Q fever passively transferred into their home by the laboratory worker. In a case similar to that of the patient described herein, Finland and Lesses³⁰ reported Q fever in an individual traveler returning to the United States from Italy, a country where many of the previously mentioned outbreaks occurred during World War II.

The present case indicates that persons going to areas where organisms are prevalent can become infected, and because of the speed of modern transportation these persons can return home during the early incubation period well in advance of the onset of recognizable illness. While it is not possible to exclude entirely this patient's infection within Maryland, exposure during his trip to endemic areas in California is the more likely possibility. It is unlikely that this patient's illness represents an isolated example of casual infection. It would seem reasonable to believe, in view of the widespread prevalence of Q fever, that unknown numbers of other travelers have become infected after going to other endemic areas both in the United States and abroad. For this reason Q fever should be included more frequently than it is in the differential diagnosis of febrile illness of unknown cause even in supposedly nonendemic areas, especially when there is a history of recent travel.

As increasing experience with the clinical manifestations of Q fever accumulates, previously unrecognized syndromes and complications have been observed that were not noted in the cases described initially. Therefore, Q fever should also be included among possible diagnoses in patients

with "atypical" or "virus" pneumonias, granulomatous hepatitis,³¹ "nonbacterial" endocarditis,³² and various chronic neurologic syndromes with fever.³³ The diagnostic specificity of a rising titer of complement-fixing antibodies for *C. burnetii* has been well documented as an indicator of recent infection. Commercial antigen is readily available, and the complement-fixation test can be performed in any appropriately equipped serologic laboratory. For these reasons it is feasible to include an examination for Q fever when investigating for the etiology of an unknown febrile illness.

Despite the fact that the diagnosis is often not possible until late in illness or during convalescence, frequently following the use of broad-spectrum antimicrobials, nevertheless it remains important to establish a specific etiologic diagnosis whenever possible after a recent infectious illness.

Summary

A patient was hospitalized with chills and fever of unknown etiology in May 1963. Significant history disclosed that he had traveled in California in late March and early April 1963. Acute phase serum showed no titer, and a convalescent phase serum in June 1963 showed a complement-fixation titer of over 1:16,000 for *Coxiella burnetii*. Complement-fixation titer 1 year later in June 1964 was 1:64. Some aspects of the current epidemiologic knowledge of Q fever have been discussed with the suggestion that this infection should be suspected in patients with febrile illness and/or pneumonitis returning from areas where Q fever is known to be endemic.

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Doctor Afield

Dr. William Thornton (1761-1828): First Capitol Architect

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DR. WILLIAM THORNTON—physician, amateur architect, inventor, writer, artist, public servant, and cultured gentleman—was one of the less well-known intellectuals of the late eighteenth and early nineteenth centuries who contributed richly to our national heritage (figure 1). Born to well-to-do Quaker parents on the island of Jost van Dyke, near Tortola, British West Indies on May 27, 1761, he rose to prominence in 1792 when he was awarded \$500 and a city lot for designing his adopted Nation's Capitol Building.¹

William Thornton studied medicine at the University of Edinburgh (1781–1784) and received his M.D. degree from Aberdeen University in 1784. After travel on the Continent he returned to the West Indies to look after his father's extensive holdings. From there he emigrated to the United States, becoming a naturalized citizen on January 7, 1788. He settled in Philadelphia, and in 1789, without formally having studied architecture, entered and won a contest promoted by the Library Company of Philadelphia for its new building.¹

Dr. Thornton returned to his native island in 1790 following his marriage to a young Philadelphia socialite. He first learned of the important open competition for the new Capitol in July of 1792, 3 months after the deadline for entries had passed. Permission for him to compete was granted because the officials were dissatisfied with the drawings already received.

The plan that resulted “captivated the eyes and judgment of all,” in the words of Secretary of State Thomas Jefferson. President Washington praised the design for its “grandeur, simplicity, and convenience.” The exterior of the future Capitol was pictured as a stately Georgian structure with a low-domed center (Rotunda) flanked by balancing North and South Wings for the House and Senate (figure 2). Because of Thornton's inexperience with architecture and building, Étienne Sulpice Hallet, runner-up in

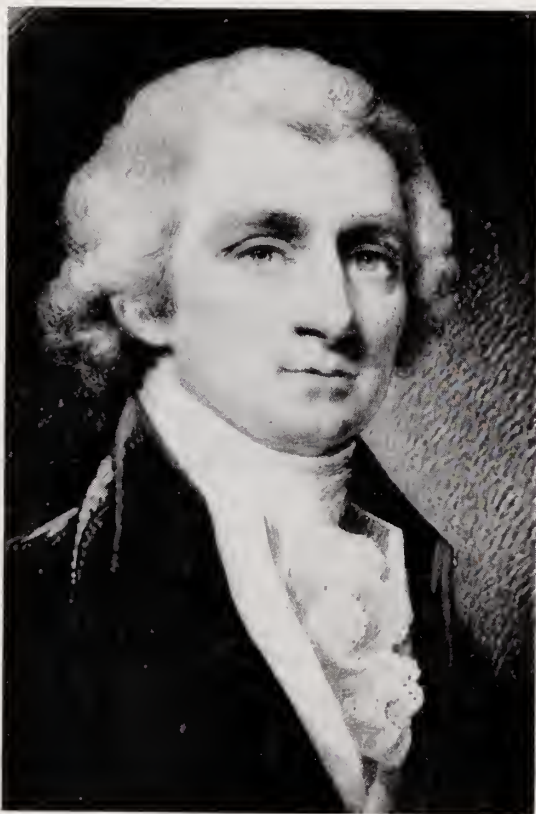


FIG. 1. William Thornton, M.D.

the competition, was named to oversee construction and Benjamin H. Latrobe to redesign the interiors. Hallet, after numerous clashes with Thornton over construction details, was dismissed in 1794 and replaced by James Hoban, designer of the White House.²

The cornerstone was laid in 1793 and the North Wing completed in 1800. By 1801 the House (106 members), the Senate (32 members), Library of Congress, Supreme Court, and Circuit Court had moved over from Philadelphia. The South Wing was completed in 1811 under the supervision of Latrobe, who was appointed Surveyor of Public Buildings in 1803. North and

South Wings were temporarily joined by a wooden passageway. The construction of the Rotunda was interrupted by the British attack on Washington on August 24, 1814, at which time both the Capitol and White House were heavily damaged by fire. Reconstruction was begun in 1819 under the supervision of Charles Bulfinch, first native-American to have charge of Capitol construction. The North and South Wings were completely restored in 1829 according to Thornton's original plans. The Rotunda was finally completed in 1827 and covered by a wooden canopy overlaid with copper until work on the giant cast iron dome was started in 1855. The original House chamber is now the Statuary Hall, and the old Senate chamber, meeting place for the Senate until 1859, is now a hearing room.²



FIG. 2. An artist's concept of Thornton's original original design (from the Kiplinger Collection).

Thornton's services as architect were in great demand after his plans for the Capitol were accepted. In 1797 Colonel John Tayloe of Mount Airy, Virginia selected Dr. Thornton to design a town residence on a sharply angled lot which is now located at New York Avenue and Eighteenth Street, N.W. The plans called for a building of unusual architectural design—a graceful Georgian structure with a semicircle as front facade and 6 sides. "Octagon House" was completed in 1800 and soon became the center of social life in the new Capital. When the British burned the White House in 1814 President and Mrs. Madison moved in and stayed for 1 year. During this time, in the majestic circular room which the President used as a study, the Treaty of Ghent was ratified on February 17, 1815, terminating the War of 1812. The house is now national headquarters for the American Institute of Architects and was preserved as a National Historic Landmark in 1961.³

Tudor Place, considered to be one of Georgetown's most distinguished houses, was designed by Thornton and built between 1794 and 1815 for Thomas Peter and his wife, Martha Park

Custis, who was Martha Washington's granddaughter. The young architect also designed Woodlawn, a home completed in 1805 for Major Lawrence Lewis, nephew of George Washington, and his wife, Eleanor Custis, Martha's adopted daughter. The plantation was part of Mt. Vernon lands set aside for the Lewises by Washington as a wedding present. It remains one of the most interesting Virginia estates of the early 19th century and since 1951 has been administered by the National Trust and Historical Preservation Society. In addition to these outstanding achievements Thornton is credited with designing Montpelier, the Virginia home of President Madison, Brentwood, an estate in the District, 2 houses for President Washington, and many pavilions of the University of Virginia.⁴

During his most active years as architect Dr. Thornton also served as Commissioner of the City of Washington, appointed by Congress upon recommendation of the President. In 1802, after retiring as Capitol architect, he became the first Superintendent of the Patent Office, a post held until his death on March 27, 1828. He is buried in the Congressional Cemetery with Latrobe, Hayley, and Mills, all architects of importance during the founding years of our nation.^{1, 5}

In addition to his architectural endeavors and government positions, William Thornton's astonishing career included such diverse interests as writing, astronomy, medicine, philosophy, finance, art, language, farming, sheep-raising, and horse-breeding. The Magellanic gold medal was conferred upon him by the American Philosophical Society for his book on the elements of the written language and a treatise on new methods for teaching the deaf. Between 1778 and 1790 he worked with John Fitch on the paddle steamboat and in 1814, after Fulton's success, published "A Short Account of the Origin of Steamboats," which placed his own accomplishments in proper historical perspective. He actively championed the Abolitionist movement and in his will left a large sum of money for its support. In 1815 he recommended the formation of a Pan American Union and foresaw the need for a canal across Panama.^{1, 5} As a fitting climax to his lifelong interest in medicine, in 1819 Dr. Thornton was elected a member of the Medical Society of the District of Columbia, founded only 2 years previously. He remained an active member until his death and served that organization as Vice President in 1820 and 1823.⁶

Perhaps the most fitting epitaph for this truly great figure was written by Dunlop in 1918:

(Continued on page 402)



PRESIDENT'S PAGE

SECTIONS OF THE MEDICAL SOCIETY



UNDER OUR NEW CONSTITUTION the 18 Sections of the Medical Society of the District of Columbia come under the jurisdiction of a separate Council consisting of representatives from each Section and chaired by a member of the Executive Board.

The Society thus recognizes the vital importance and role of the specialty groups. We are also aware of their dependence upon the Society for organizational and administrative needs. These needs will become increasingly important as "other parties" in medicine increase in number through socioeconomic factors and current legislation. A state medical society cannot speak for a social specialty group. It can represent and fight for a section and its own unique requirements. In the past the policies of a section were determined by our Active members. Today our Associate members are welcome to assume an active role. This emphasizes our metropolitan as well as our local medical responsibilities.

The first Sections were created in 1911. The Constitution then provided that they be devoted to the consideration and promotion of special branches of medicine. Each succeeding Constitution has enhanced their stature and role. Our present goal is to improve our earlier aspirations.

The renewed activity of Sections of the Medical Society is a 2-way street. Not only can the parent organization coördinate the activities of a section and aid the members in paramedical relationships but the sections can stimulate the entire Society. As an example to those who counsel a "return to the Society"—the Sections are the instruments through which this concert could be blended. Our new organizational structure and our new building will make this possible. Some sections have recently participated in our ANNUAL SCIENTIFIC ASSEMBLY; e.g., last year the Section on Internal Medicine produced a fine session. This year others will follow suit.

Our new building will have the facilities to accommodate any sectional or group meeting with or without the participation of the entire membership. Each section might, in rotation, conduct a postgraduate seminar or symposium. This is an exciting idea and one which would provide each doctor in this area, regardless of specialty, an opportunity to participate in scientific programs. All of the excellent medical schools, local and Federal agencies, social and scientific groups in and around Washington should be a part of this ideal goal in postgraduate medical education. The Medical Society working through its excellent Sections can make such a goal a reality.

Paul R. Wilner

LOMOTIL *Pharmacologic Activity*

The significant pharmacologic actions of Lomotil are summarized as follows:

Evidence indicates that Lomotil acts directly on the intestinal musculature to inhibit excess peristalsis.

Lomotil is not known to inhibit nonpropulsive intestinal movements.

Roentgenograms demonstrate that this activity occurs within two hours after oral administration and persists for at least six hours.

Comparative studies in the rat show Lomotil to be more effective in inhibiting fecal excretion than either codeine or morphine.

Analgesic, anticholinergic, mydriatic and gastric secretory effects have not been significant.

Reduction of propulsive motility with Lomotil relieves spasm and cramping, allows physiologic absorption of fluid and reduces frequency of evacuations to provide prompt, symptomatic control of virtually all diarrheas.

LOMOTIL[®]

Each tablet and each 5 cc. of liquid contains:

diphenoxylate hydrochloride 2.5 mg.

(Warning: May be habit forming)

atropine sulfate 0.025 mg.

tablets • liquid

slows propulsion



relieves distress



stops diarrhea



Precautions: Lomotil is an exempt narcotic preparation of very low addictive potential: more than three million prescriptions have now been written for Lomotil. Recommended dosages should not be exceeded. Lomotil should be used with caution in patients with impaired liver function and in patients taking addicting drugs or barbiturates.

Side Effects: Side effects are relatively uncommon but among those reported are gastrointestinal irritation, sedation, dizziness, cutaneous manifestations, restlessness and insomnia.

Dosage: For full therapeutic effect—Rx full therapeutic dosage. The recommended initial daily dosages, *given in divided doses*, until diarrhea is controlled, are:

Children:

- 3 to 6 months—3 mg. ($\frac{1}{2}$ tsp.* t.i.d.)
- 6 to 12 months—4 mg. ($\frac{1}{2}$ tsp. q.i.d.)
- 1 to 2 years—5 mg. ($\frac{1}{2}$ tsp. 5 times daily)
- 2 to 5 years—6 mg. (1 tsp. t.i.d.)
- 5 to 8 years—8 mg. (1 tsp. q.i.d.)
- 8 to 12 years—10 mg. (1 tsp. 5 times daily)

Adults:

- 20 mg. (2 tsp. 5 times daily or
- 2 tablets 4 times daily)

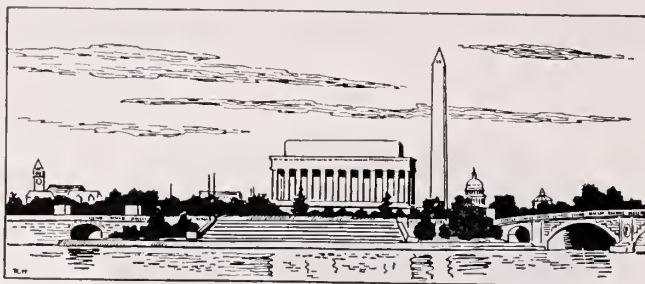
*Based on 4 cc. per teaspoonful.

Maintenance dosage may be as low as one fourth the therapeutic dose.

Lomotil is a brand of diphenoxylate hydrochloride with atropine sulfate; the subtherapeutic amount of atropine is added to discourage deliberate overdosage.

SEARLE

*Research in the
Service of Medicine*



EDITORIALS

Adverse Drug Reaction Reporting and the Related Establishment of a Registry of Tissue Reactions to Drugs

IN THE SOMEWHAT SPASTIC CONCERN and interest in drugs that have been seen since 1959 there has been much preoccupation with the adverse reactions due to drugs. The desirability of early recognition of a drug's propensity for inducing undesirable and even life-threatening effects is nothing new. The difficulties inherent in such early recognition are also not new. Neither is the fact that any drug which can modify a physiologic function to benefit an ill patient if properly used can likewise modify that function to harm the patient if improperly used. In much of the uninformed hue and cry that has been raised concerning drug-induced disease one almost feels something new has been discovered about drugs. This is not true. The potential harmful side-effects of a drug are a part of the irreducible minimum of drug information the physician needs. Many of them are inherent in the pharmacologic properties of the drug. The pendulum may well have swung too far in stressing the harm which may be caused by drugs out of proportion to their benefit when they are used properly. Possibly out of this future benefit may accrue to the medical profession and the patient.

At any rate, the AMA Registry on Blood Dyscrasias, working closely with its Council on Drugs, had been collecting data relative to the association of drugs with various blood dyscrasias and making this information available to interested physicians since the mid-fifties. In 1960 this Registry became the Section on Adverse Reactions of the AMA Department of Drugs and its duties were enlarged to become a Registry for all drug-related adverse reactions, again working closely with the AMA Council on Drugs. The Section on Adverse Reactions was charged par-

ticularly to set up an early warning system for drug reactions. With the aid of a variety of panels of experts and the Council on Drugs much thoughtful planning has gone into this endeavor. These panels, among other things, are designed to monitor all reported adverse reactions to drugs which fall within their area of professional competence and to judge the degree of validity the reactions bear to the drug in question.

This question of the degree of validity which may reasonably be attached to the drug suspected of causing a potentially or actually harmful reaction in a patient gets to the real heart of any drug-warning system. It has a real and practical bearing for the physician and his patient in order that the physician may more accurately assess the potential risk or harm the drug may produce in the patient against its potential benefit to the patient. Hysterical and questionably valid overemphasis on the potential risk of a drug may so misinform the physician that he fails to utilize the best drug to treat the patient so as to obtain maximum benefit to the patient.

Factors which can improve validity are large numbers of suspected drug-associated reactions observed by physicians engaged in all types of practice, carefully analyzed and documented at the source and transmitted to a common repository for evaluation, storage, and ready retrieval for continuing correlation and study. This immediately suggests the utility of electronic data-processing equipment. Preliminaries to effective use of such equipment involve the production of standardized forms, vocabulary, dictionary, lists of drugs and their synonyms, lists of diseases, etc. Only when these preliminaries have been properly completed has the time arrived to approach the

Opinions expressed in contributions to the Editorial Section are those of the writers and do not necessarily reflect the views of the Medical Society of the District of Columbia

medical profession and solicit its massive and continuing coöperation in searching for suspected drug-related patient reactions, noting all the information observed on the appropriate form and transmitting the completed form to the central repository. From this center the profession should reasonably expect to issue at appropriate intervals valid information bearing upon a drug's propensity for causing certain undesirable reactions in patients.

Two groups in addition to the AMA, the Food and Drug Administration and the pharmaceutical industry, obviously have an equally great interest in learning as much as possible about valid and undesirable patient reactions to all drugs and especially related to newer drugs as soon as possible after they are marketed. The 1962 Drug Amendments require pharmaceutical companies to report all unexpected reactions associated with drugs, experimental or marketed under a New Drug Application, to the FDA Bureau of Medicine, making of the FDA, since 1962, a repository for such information. But in 1962 the FDA was only beginning to enlarge its staff to discharge its added responsibilities under the new law. Clearly, a pooling of resources and a division of labor on the part of these 3 groups would be a forward step in the public interest. Such a step was taken many months ago. As a result of their combined efforts since then (a) there is currently available a standardized form which, with minor modifications, can serve all 3 as the common type of form upon which the observing physician can readily report all essential adverse reaction data; (b) there is nearing completion a standardized vocabulary and dictionary of preferred terms for drug-induced reactions as well as synonyms for such terms; (c) there are available lists of drug names, both generic and proprietary; and (d) there are available lists of disease entities, etc. In short, all the paraphernalia so essential to effective use of electronic data-processing equipment is about ready to become operative. To reach this state of readiness has involved countless hours of coöperative, unglamorous drudgery on the part of many individuals from the 3 interested and coöperating groups.

Of supreme concern and importance to all interested parties is the type of drug-related reaction that is associated with death or with overt damage to some bodily part. To clearly establish an unequivocal, valid causative relationship as soon as possible is essential, for if such is established it may become necessary, if not to absolutely interdict the use of such a drug, to more

clearly and specifically delineate the conditions under which it may be used with benefit outweighing harm to the patient. Under such circumstances all avenues of approach that can produce valid data which will aid in affirming or negating a causative relationship must be followed.

Historically, one of the most final and incontrovertible validating agencies in medicine has been the pathologist for establishing the causal agents related to human pathology. It was with this in mind that the Commission on Drug Safety and, later, the Drug Research Board recommended the establishment of a Registry of Tissue Reactions to Drugs.

The obvious place for such a Registry would be under the wing of the Armed Forces Institute of Pathology, where over 20 other registries have been developed to carry on continuing research in a variety of special areas dealing with pathology under optimal if not ideal circumstances. The AFIP has a long history of working harmoniously and coöperatively with pathologists in obtaining autopsy or biopsy material, preparing it for sophisticated study in depth, relating it to associated material available in their extensive collection, and correlating the results with other clinical and laboratory data also available in their files.

Happily, the 3 interested groups, the AMA, the FDA and the PMA, readily recognized the contribution a Registry for Tissue Reactions to Drugs could eventually make in either validating or invalidating the contribution of the drug to the more serious reactions associated with drug use. Discussions were initiated with the AFIP through the good offices of the NAS-NRC, the agency which has monitored the formation of the other registries.

Following numerous discussions and consultations with the staff of the AFIP and interested members of the NAS-NRC (more recently also with the Universities Associated for Research and Education in Pathology, Inc. [UAREP] which is relieving NAS-NRC of certain of its fiscal responsibilities to the various registries), the AMA, FDA and PMA agreed to sponsor and to support financially as full partners the establishment of a Registry for Tissue Reactions to Drugs. This will be housed in and operated by the AFIP essentially precisely like the other registries. The forms for reporting adverse reactions have been modified to inquire whether autopsy or biopsy material is available in any reported case of a suspected adverse drug reaction. When it is, the Registry will be alerted and, working coöperatively through the pathologist directly involved, will obtain such

material as is available for study and analysis and add it to its collection.

If past contributions of pathologists are any guide it is very probable that in time there will be enough pathologic material available in the Registry where drugs have been involved so that any consistent, undesirable tissue reactions observed can unequivocally be related to the drug in some cases. In others, of course, such reactions may well equally unequivocally not be drug-related. The eventual importance of the contribution this Registry may evoke to make more valid certain of the adverse reactions reported is appreciated by all interested parties. The cost of maintaining such a registry is considerable. However, if the Registry can clearly verify the safety of but 1 useful and effective drug or can equally clearly validate the hazard of 1 or more drugs, its contribution to safer and more effective use of drugs by the physician will well warrant its continuing place in the development of valid drug information. It is expected this Registry should be in operation sometime this fall.

The foregoing has attempted to put into proper perspective what has been going on in the adverse drug reaction area by the major interested parties. AMA and FDA have agreed to devote their major efforts as follows: The FDA will solicit reaction reporting from all Government and several hundred larger teaching hospitals; the AMA will do likewise from all other sources of adverse drug-reaction data. Both have been quietly and systematically contacting such sources and stimulating them to forward all adverse reactions to one or the other agency. Both have agreed to ex-

change all data on adverse drug reactions which they receive, keeping strictly confidential, however, the name of patient, physician and hospital. In a general way, it should be apparent that the AMA will expose this input to their panels for maximum validation and use the results to aid in the proper education of the physician concerning drugs. Presumably, the FDA will coöperate wholeheartedly in this aspect, but they also have further need of such information to properly discharge their regulatory responsibilities.

Looking forward, then, one can expect to see a more extensive educational effort designed to stimulate as many physicians as possible to look for possible drug-associated reactions, to carefully record these, and to forward them to either FDA or AMA. It is hoped a massive and continuous input will be realized, since the machinery for handling such an input is nearly ready. An increasingly valid and educational feedback proportional to the input, of course, can also legitimately be anticipated for the future.

Finally, perhaps the extent of this rather massive effort in but 1 aspect of the drug information picture has not only promoted better understanding of each other's problems but hopefully laid a firm foundation for ever better coöperative and fruitful educational endeavors in the broad field of information on drugs by the 3 groups most concerned.

JEAN K. WESTON, M.D.

*Director, Department of Drugs, and
Secretary, Council on Drugs, American
Medical Association*

John Shaw Billings Centennial

THE NATIONAL LIBRARY OF MEDICINE observed its 100th anniversary with a special program on June 17. The anniversary was named the John Shaw Billings Centennial in commemoration of the Library's first Director.

An internationally known surgeon, sanitarian, medical bibliographer, educator, and authority on hospital construction, Dr. Billings was chiefly responsible for developing the Library into the world's leading institution for the collection and dissemination of biomedical knowledge. He was assigned to Washington in the Office of the Surgeon General, U. S. Army, after distinguished service during the Civil War as a military surgeon in the field. He assumed charge of the Library of

the Surgeon General's Office, forerunner of the National Library, in 1865.

Serving as Library Director for 30 years, Dr. Billings laid the foundation for modern medical librarianship through the publication of key bibliographic guides. He also conceived the idea of a punch card tabulation system for manipulating statistics, the first step in developments which have led to the Library's present computer-based Medical Literature Analysis and Retrieval System (MEDLARS).

Dr. Billings was born in Indiana in 1838 and died in 1913. He was elected an Honorary member of the D.C. Medical Society in 1875.

Annual Report of President of Medical Service*

DURING THE YEAR JUST PAST, an important milestone was reached when enrollment in Medical Service passed the million mark. With approximately half of the residents of the Washington area financing their medical expense through Medical Service of D. C., the impact of Medical Service upon the economy of the area it serves is far greater than is the case with most Blue Shield Plans.

Our efforts have constantly been in the direction of upgrading the coverage of our subscribers and increasing the scope of benefits offered by their contracts, with a resulting increase in payment for physician services. At times we may have been overly optimistic concerning the extent to which subscribers will pay for new and improved coverage. Many groups and individual subscribers resist substantial increases in subscription rates needed to cover the cost of new and added physician services.

Throughout its deliberations the Board has recognized its responsibility to make available to the subscribing public a program which it can afford. Thus, the non-Federal subscribing public is enrolled under contracts having 3 degrees of benefit structure. The Surgical Contract is limited in scope, and is low in cost; the Surgical-Medical Contract provides benefits of greater scope, including diagnostic services and nonsurgical hospital care, but the cost of this contract is reduced by deductible and co-insurance provisions. The Extended Surgical-Medical Contract provides for a wide variety of services and provides the full fee schedule allowance for these.

The Board of Trustees is convinced that many groups and subscribers would defect if they were forced to drop the less costly Surgical-Medical Contract and enroll under the Extended Contract with its full scope of benefits and payment in full for diagnostic services. The Board does advocate, however, a strenuous effort to sell the public on the advantages of the Extended Surgical-Medical Contract, and we are convinced that subscribers will upgrade their coverage themselves if given encouragement and the opportunity to do so. Already, nearly 150,000 subscribing participants

have newly enrolled or converted from lesser contracts to the Extended Surgical-Medical Contract—all within the past 18 months.

During the past year the Board of Trustees has given continuing attention to requests by various medical specialties that benefits be increased for medical services, and that fees be increased for surgery and anesthesia services by adoption of the PSI (Professional Services Index) with increased conversion factors for all contracts and programs administered by Medical Service.

At its last meeting the Board of Trustees of Medical Service agreed that it would be advantageous to adopt the PSI for use with local accounts as well as national accounts. It was recognized that fee schedules have been consolidated to the extent that only 1 schedule is in existence for laboratory and radiologic services, that only 1 schedule is in existence for nonsurgical care of a hospitalized patient (except for consultations), and that it would be desirable to consolidate payment for surgery, delivery and anesthesia services by adoption of a single Relative Value Scale which can be utilized to establish fee schedules for contracts having different income levels.

The adoption of the PSI for local accounts as well as national accounts would bring to a happy conclusion the Board's constant efforts to consolidate the variety of fee schedules which have been in effect for various programs in the past. In March 1962 Participating Physicians approved the PSI to develop 3 different fee schedules which can be applied to 3 levels of annual income for use with national accounts. The Board of Trustees now proposes that this PSI, with the conversion factors increased for surgery, delivery and anesthesia, be adopted for use with local contracts and programs as well as national accounts. Also, the Board proposes that benefits for intensive care be provided under the Surgical-Medical Contract in order that physicians will not be required to accept payment for routine care as payment in full for an under-income subscriber to whom intensive care is rendered.

As Medical Service has grown to its present proportions, it has spread its influence more and more over the expanding citizen and physician communities of the Washington area. The representation of practicing physicians on the Board of Trustees was limited for many years to members of our sponsoring Medical Society in the

* Presented at the Annual Meeting of Participating Physicians of Medical Service of the District of Columbia, June 1, 1965.



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District of Columbia. In recent years, however, the participation of physicians in the adjacent counties has grown in significant proportion, and the membership of the Board of Trustees has been expanded to provide for representation of the adjacent county medical societies. A year ago, the Board was expanded to increase the representation from nearby Maryland and Virginia by the addition of 2 more physician representatives. This year, the By-laws have been amended to provide for still another physician from Northern Virginia. Thus, in addition to the 7 members of the D. C. Medical Society serving on the Board, provision is made for a member from each of the 5 medical societies in the counties adjacent to the District of Columbia. In consideration of the public interest provision has been made for the addition of 4 lay persons to serve on the Board of Trustees. Terms to be served by those persons nominated for election to the Board this year are staggered to allow for a balanced turnover of the Board in succeeding years. In addition to the physicians and laymen nominated for election to the Board of Trustees at this meeting, 5 physician members of the D. C. Medical Society and 2 lay persons are continuing their service on the Board of Trustees.

Another amendment to the By-laws adopted by the Board provides for the appointment of the Executive Committee of the Board, comprised of 8 members, 2 of whom shall be laymen. The President and First Vice President of Medical Service will be members of the Executive Committee. The remaining members are to be appointed by the President and confirmed by the Board. The Committee will have the power and authority to act for the Board between meetings and its actions will be considered those of the Board. However, the Committee does not have the power to amend the By-laws or to act for the Board in policy matters.

In seeking to meet the needs of various segments of the community for financing medical care Medical Service has become more and more flexible in its efforts to meet the particular needs of individual elements of the population at large. During the past year the Senior Citizen Contract was expanded to provide more of the services which our older people require; also, we have recently offered to the universities of the Washington area a program designed to meet the health care needs of their students. It is our hope and expectation that this program will eventually become the standard financing mechanism for the

health care of approximately 30,000 university students in the Washington area.

The efforts made by Blue Shield and Medical Service to participate in and administer programs which are sponsored by the Federal Government have been well rewarded. From Medicare for the dependents of members of the uniformed services and from the Federal Employee Program administered by Blue Cross and Blue Shield have come the uniformity and administrative experience which make it possible to bid on new and important health benefit programs the Federal Government might otherwise administer on its own behalf. Two weeks ago Blue Cross and Blue Shield signed a contract to administer a health benefits program for Vista Volunteers,* and it is expected that a similar program will be implemented for the 200,000 members of the Job Corps program now being organized. Also, our experience in the successful management of the Federal Employee Program may hopefully influence legislation for financing the health care of the aged to allow a choice from among several different kinds of programs, including Blue Cross and Blue Shield.

HENRY L. DARNER, M.D.

President

* Volunteers in Service to America

Patients Needed for Studies of Liver Disease

THE COÖPERATION OF PHYSICIANS is requested in a clinical study of liver disease of uncertain etiology being conducted by the Metabolism Service of the National Cancer Institute at the Clinical Center of the National Institutes of Health.

Of interest for this study are patients with liver disease of uncertain etiology who would require, in the opinion of the referring physician, a liver biopsy as well as other studies to help establish the specific diagnosis. Those patients with long-standing hyperbilirubinemia or abnormal serum enzyme levels (SGOT, etc.) would be of particular interest.

Patients who are accepted for this study will be admitted to the Clinical Center for approximately 2 weeks and should anticipate having a liver biopsy performed.

Physicians interested in having their patients considered for the study may write or telephone Dr. Matthew Menken, Clinical Center, Room 4-N-117, National Institutes of Health, Bethesda, Md. 20014; telephone: 656-4000, Ext. 65955.

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Report on Finances and Administrative Services of Medical Service*

ONE MEASURE of the growth of Medical Service over the years is the amount paid for physician services during any one year. It is significant that, in 1964, Medical Service paid \$4,700,000 more for physician services than was paid in 1963. The total of \$27,195,783 paid for physician services in 1964 would provide each Participating Physician with a payment of more than \$9,000. Also, during the year Medical Service added \$880,214 to reserves, to establish a total reserve of \$6,720,425. This reserve would provide payments for $2\frac{3}{4}$ months of claims and operating expense, slightly less than the reserve position recommended for Blue Shield Plans by the National Association. While additions to reserves in 1964 increased over the amount added to reserves in the preceding year, it should be noted that a substantial portion of our addition to reserves resulted from income from investment.

The numbers of subscribers enrolling in Medical Service, both through the Federal Employee Program and our local contract arrangements, have been impressive and gratifying. At the close of the year there were 1,027,372 persons covered by Medical Service, of whom 512,061 were enrolled in the Federal Employee Program and 515,311 were enrolled under our own non-Federal contracts. Enrollment was increased in 1964 by 84,965 participants over the preceding year. In a report presented by the Enrollment Committee of the National Association of Blue Shield Plans, Medical Service is fourteenth in the total number of persons enrolled, fourth in the percentage of population enrolled, and first in the number and percentage of subscribers enrolled in the Federal Employee Program. It is gratifying to find that Federal employees in the Washington area and nationwide continue to choose the Blue Cross-Blue Shield program over all other available programs combined. During the open enrollment period last February, when Federal employees were given the opportunity to change from one program to another, the Government-wide Indemnity Plan administered by Aetna showed a net loss of 7,826 participants, whereas the Blue Cross-Blue Shield Service Benefit Plan gained 15,038 participants, with the total enrollment in Blue Cross-Blue Shield constituting 56 per cent of all enrolled Federal employees.

With 473,395 participants covered under the Supplemental Benefits portion of the Federal Employee Program, and 153,761 persons covered under our local Comprehensive Contracts, we find that about 61.04 per cent of all participants are protected under Major Medical or Supplemental Benefits. Payment of physician services under this type of coverage has increased tremendously the amount paid to local physicians for services and charges which are not covered under the subscriber's basic contract.

The numbers of physicians participating under agreements with Medical Service increased during the year to a total of 2,971 (2,802 M.D.'s, 81 D.S.C.'s, 78 D.D.S.'s and 10 D.O.'s). The continuing participation and support of physicians practicing in the Washington area are the essence of our strength. These are elements in a program for financing medical care which cannot be duplicated by insurance schemes or panel practice programs. With more than 90 per cent of the practicing physicians in the Washington area participating in Medical Service, subscribers have unusual assurance that they can obtain from a Participating Physician the unique benefits provided by their contracts.

Under an operating agreement between Group Hospitalization, Inc. and Medical Service of D. C., GHI acts as the agent of Medical Service in such administrative functions as the enrollment of subscribers, billing and collecting subscription payments, and the payment of claims.

In 1964, the Basic Claims Department processed some 712,606 Medical Service claims, a record of more than 2,800 each working day. The approval and payment of claims in such large numbers have not been accomplished without difficulty. In order to process increasingly large numbers of claims with desirable speed and accuracy, modern electronic procedures were developed and instituted during the past year. The first phase of the program, which is to modernize claims processing by use of an electronic computer system, was instituted last December.

By use of the computer, basic records which were previously stored in case files have been stored on magnetic tape, and as claims are received these data are processed by the computer to confirm or extract basic information. Thus information needed for the processing of an individual claim is readily available and there is no

* Presented at the Annual Meeting of Participating Physicians of Medical Service of the District of Columbia, June 1, 1965.

reason to defer action on a claim because the patient's record is charged out of file.

There are other virtues to the use of the computer system, such as increased accuracy and speed. The records on magnetic tape reflect basic information related to the subscriber's contract, and information furnished on the Physician's Service Report must agree with that contained in the taped records if the request for claims information is to be accepted by the computer. Under the circumstances it is essential that physicians provide accurate data on the Physician's Service Report if they wish to avoid delay in payment.

The use of the computer for Medical Service claims administration is, at this time, limited to the acquisition of basic contract information necessary for the initial processing of a Physician's Service Report. The next phase of development in the use of the computer system for claims administration will be the determination of eligibility, and fee assignment related to procedure codes listed on the Physician's Service Report or assigned in the Claims Department. This phase of claims administration will require careful reporting of procedures performed by Participating Physicians. The realization of this phase of claims administration by computer is expected by the end of this year.

Last year, in the period of transition from mechanical to computer operation, a slowdown in claims processing occurred and, as various side-effects developed, a serious backlog of claims resulted. Today, however, claims processing is on a current basis, and claims which can be handled routinely are paid within 3 weeks of the date they are received.

Despite the trend toward enrollment in contracts offering benefits for a wide variety of physician services, all of which tend to increase claims volume, with a resulting increase in operating cost, the percentage of earned subscription income attributable to operating cost is well below the average for all Blue Shield Plans. Our operating cost in 1964 amounted to 7.0 per cent of earned subscription income, whereas the national average was 8.72 per cent. Other comparisons with national averages show that our reserves, which are equivalent to 2.75 months of claims and operating expense, are slightly below the national average (3.16), and for the payment of physician services Medical Service used 91.1 per cent of subscription income, an amount almost identical with the average for all Blue Shield Plans.

While it may seem sometimes that Medical Service is making slow progress from one year to

the next, a comparison of the present with the past is very revealing. When Medical Service began operations, benefits were provided only for in-hospital surgery and related laboratory and X-ray procedures. Over the years broader programs were developed which included surgical care outside the hospital as well as in, physician services to nonsurgical patients in the hospital, and diagnostic services both in and out of the hospital. Additionally, Medical Service, together with Group Hospitalization, Inc., developed a comprehensive program to provide benefits for covered Major Medical expenses incurred after benefits of basic coverage are exhausted, or to which basic benefits are not applicable.

During the years of development of benefit patterns and contract coverage, the numbers of physicians participating in Medical Service increased from 826 at the time the Plan began operating to more than 3,000 at the present time. The family income level in 1948 was \$4,500. It now is \$6,000 for non-Federal subscribers and \$7,500 for the Federal Employee Program. The fee for an appendectomy in 1948 was \$85. At the present time it is \$120 for non-Federal subscribers and \$166 for Federal employees enrolled under the High Option Program. At the end of 1948 there were 111,867 participants enrolled; at the end of 1964 there were more than 1 million. I am confident that, with the continued coöperation of physicians participating in Medical Service, the trends of the past will continue in the future, and that Medical Service of D. C. will continue to play a large role in the medical economy of physicians and the public alike.

GEORGE B. MCGOVERN
Executive Vice President

Health Dept. Notes

The District's Birth Control Program

THE BIRTH CONTROL PROGRAM operated by the Department of Public Health is notable for at least 2 reasons. It is the first such program for which Congress has appropriated Federal funds, and it has, in a single year, greatly exceeded its original aspirations.

In recent testimony before the Senate Appropriations Subcommittee there was occasion to review the brief history of the District Program. These are some of the points which were developed.

"Since its beginnings in April, 1964, the Birth Control Program has had a remarkable acceptance. We have been seeing patients at the rate of about 3,000 a year, with more than 200 new participants added each month.

"An additional 600 women who were interested in birth control but could not be aided under Health Department rules have been referred to Planned Parenthood of Washington.

"About 15 per cent of those enrolled in the Program are referrals from the Department of Public Welfare and are recipients of public assistance.

"We are presently seeking to establish a clinic team to relieve pressure on the maternity clinic staff which now provides birth control services. Such a team would serve approximately 5,000 persons, going from clinic to clinic throughout the District. Beyond this, we would later like to see additional teams, each assigned to a single clinic."

The origins of the Birth Control Program were quite modest. A fund of \$1,000 was obtained from Congress 2 years ago to underwrite the printing and distribution of birth control materials for use in public maternity clinics. It was thought likely that some maternity patients, with multiple and unplanned pregnancies, might benefit from such birth control information.

To this a year later was added \$24,000 to permit the purchase of devices and supplies in a pilot program directed to some 2,400 women who might be receptive. At the same time, a Board of Commissioners' Order established the Birth Control Program in the public interest, meaning no fiscal eligibility was required.

The limited funding, however, meant that some administrative restrictions were needed, and the following categories were defined:

Women, married or unmarried, regardless of age, who have been pregnant and are patients in the maternity clinics of the Department of Public Health; mothers who are delivered at D. C. Gen-

eral Hospital (and certain contract hospitals) as public patients; mothers referred by the Department of Public Welfare (and defined by that Department as enrolled in the Aid to Families with Dependent Children).

The Program offers birth control information, services, and supplies to interested mothers in the above groups. Participation is entirely voluntary on the part of the patient, and the method used is determined in conference between the patient and her physician.

These methods include oral tablets, vaginal foams, creams and jellies with diaphragm, creams and jellies without diaphragm, and the rhythm system.

The Planned Parenthood organization of Washington has had an early and continuing role in developing the Department's Birth Control Program through giving assistance and training to our staff. This has been a most valuable aid.

There are presently 7 clinic locations in the District, including the one at D. C. General Hospital. The Program operates through the Bureau of Maternal and Child Health. It is probable that it will continue to expand primarily because of increased national interest in the matter of birth control.

MURRAY GRANT, M.D., D.P.H.
D. C. Director of Public Health

PHYSICIANS' PLACEMENT SERVICE

THE MEDICAL SOCIETY'S **Physicians' Placement Committee** maintains a service to benefit its members and other physicians by locating suitable openings, assistants or associates. It will also assist Government agencies and industrial organizations to secure physicians for their Medical Departments. Call Di 7-3111—ask for Mr. Trust or Mrs. White.

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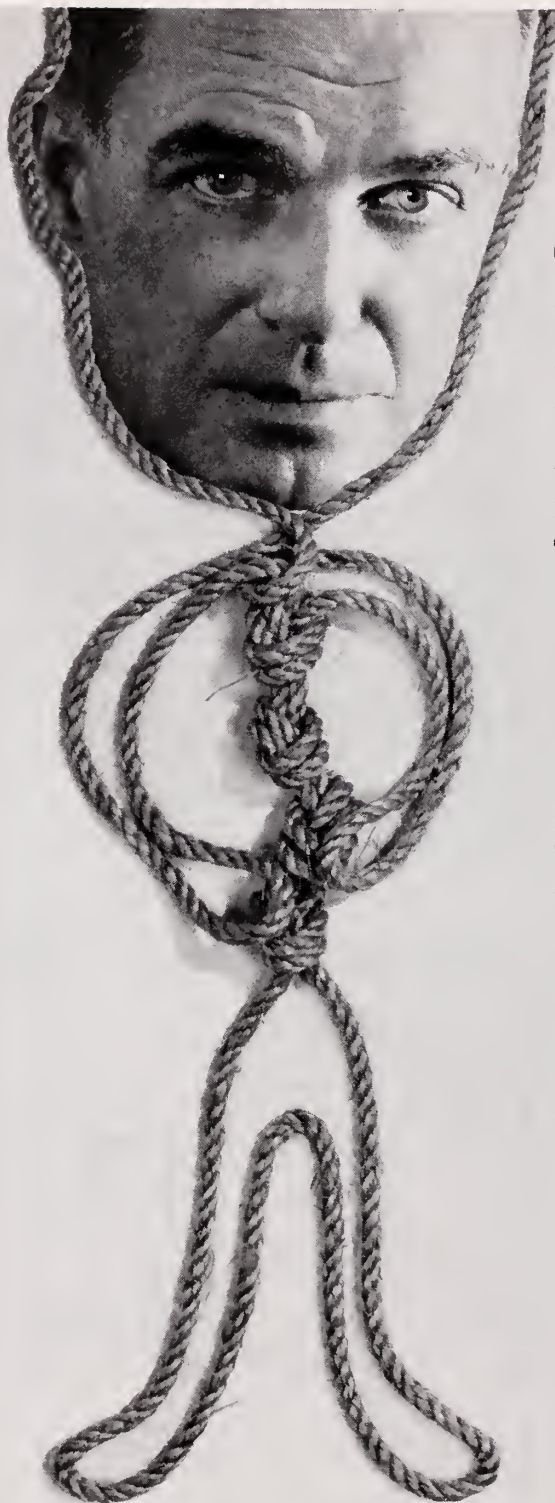
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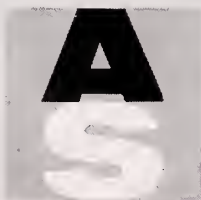
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Medicolegal Abstracts

Fluoridation: A New York trial court upheld the validity of a Health Code provision authorizing fluoridation of the water supply. That provision had been attacked on the basis that it unlawfully imposes medication on people against their will, that it is discriminatory in that it only benefits children, that it "is or may be" dangerous to health, and that other methods of reducing tooth decay are available.

In answering the contentions, the court pointed out that individual liberty may lawfully be restrained by legislation if its basic purpose is to promote public health.

That other methods of approaching tooth decay are or may be present was not relevant. This case was to decide whether fluoridation is a lawful procedure.

That the procedure is discriminatory in that it only affects children was neatly disposed of by noting that children will become adults, hence all will be affected.

The possibility that fluoridation is harmful to health is now speculative. Until such a possibility is supported by proof, the court cannot set aside the decision to use this measure in water treatment.

COMMENT: The court probably echoes the sentiment of the majority of people when it defends fluoridation on the basis that this law is directed toward promotion of public health. However, the principle that individual liberty may lawfully be restrained on this same basis is a broad one. Its blanket adoption by all courts and legislatures could allow the enactment of many laws affecting medical practice and might seriously hamper judicial review of those laws.

M-L

Antihistaminics: A physician in the state of Washington prescribed Pyribenzamine® for a passenger bus driver. After taking the first dose the driver soon began to note grogginess and drowsiness. He then blacked out (or fell asleep) and the bus left the road. An injured passenger sued the physician, charging that his negligence caused the driver to lose control of himself and of the bus. Though the trial court found in favor of the doctor, the Washington State Supreme Court reversed the decision.

The driver contended that the physician did not warn him of the possible side-effects of the drug. Physician witnesses testified that it is standard practice in that community to warn a patient of the side-effects of antihistaminics.

The physician testified that even if he was negligent, this was not the proximate cause of the accident. He held that the driver was negligent in continuing to drive after he felt groggy and drowsy. There was testimony, however, that the drug affected the driver's judgment, hence he could not be considered negligent.

COMMENT: This case is another reminder of the obligation of each physician to warn patients of the possible side-effects of medications. This is particularly timely in regard to antihistaminics as our ragweed season begins.

M-L

Average Standards of Skill and Care: An Ohio intermediate appellate court ruled that a physician may be found negligent even if he has exerted "that skill, knowledge, diligence, and care . . . possessed and exercised by the average physician specializing in that branch of medicine. . . ."

The case involved an anesthesiologist who allegedly injected alcohol into the spinal cord as an anesthetic, thus causing the patient's subsequent paraplegia. On the anesthesia tray were containers of Xylocaine® and alcohol which looked alike. The alcohol was not colored. The patient held that handling these 2 substances on the same tray was negligent, that the wrong one was injected because of this negligent handling, and that this caused the paraplegia.

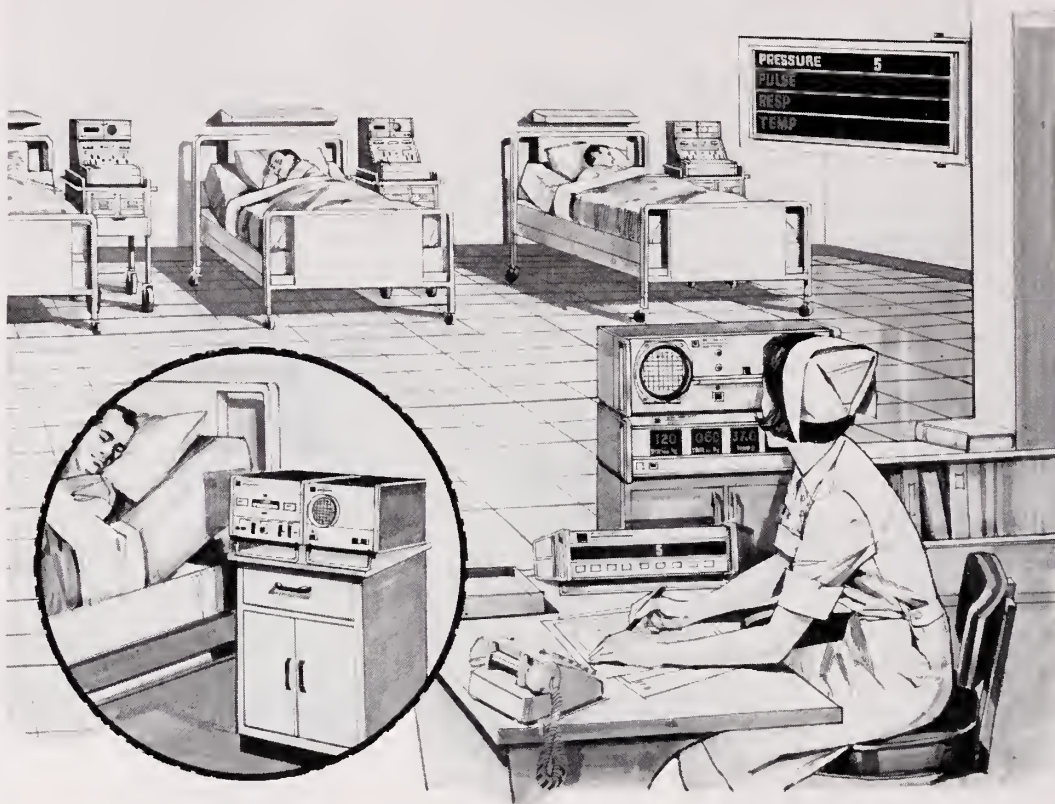
The medical experts for the physician stated that the paraplegia was caused by a thrombosis disassociated from and not caused by an injection of a neurolytic substance as an anesthetic.

But the major defense point was that it was the usual custom and practice to handle the 2 substances on the same tray.

The court held that customary methods or practices employed in a profession are not conclusive on the question of negligence. Conformity to such methods and practices is one circumstance to be weighed with other circumstances in determining whether there was negligence.

COMMENT: This decision suggests that each physician must determine for himself whether his methods and practices are possibly negligent, regardless of whether they are those employed by his colleagues.

(Continued on page 402)



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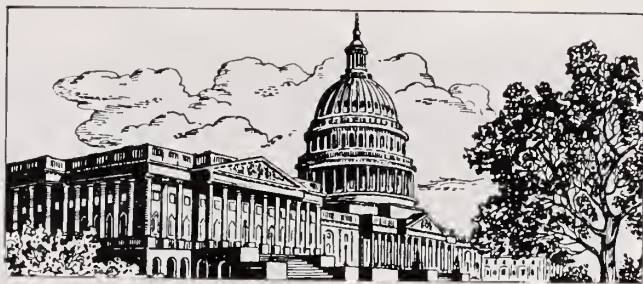
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NEWS & PERSONALS

Meetings

The Committee on Injuries of the American Academy of Orthopaedic Surgeons will hold the **Second Postgraduate Course on Fractures and Other Injuries** at the Riviera Motel, Atlanta, Georgia, on October 11-14, 1965. The program has been arranged by an Atlanta committee under the chairmanship of Dr. Wood Lovell. The visiting faculty will consist of 14 outstanding teachers, and 20 surgeons from the medical schools of Georgia will take part.

The course is open to all physicians. The registration fee is \$75.00. Inquiries may be addressed to Mr. John K. Hart, Executive Secretary of the Academy, 29 East Madison Street, Chicago, Illinois 60602.

General News

Dr. Henry L. Darner, President of Medical Service of the District of Columbia, announced, June 23, that the number of lay trustees on the Board of Trustees has been increased from 4 to 8. The Board now consists of 13 practicing physicians, 1 physician representing the Public Health Service, 1 physician representing the D. C. Health Department, and 8 laymen.

Three physicians newly elected to the Board are Dr. Philip H. Philbin, nominated by the D. C. Medical Society; Dr. John O. Robben, nominated by the Montgomery County (Md.) Medical Society; and Dr. Peter Soyster, nominated by the Fairfax County (Va.) Medical Society.

The new lay members of the Board are: Mr. Leonard B. Doggett, Jr., President of Doggett's Parking Company; Mr. Frederick Dorn, personnel director of the Bureau of National Affairs, Inc.;

Dr. Leonard Elstad, President of Gallaudet College; Mr. Joshua Stedehouder, President of Central Charge Service; and Mr. William J. Warner, Vice President of Griffith-Consumers Company.

At the annual meeting of the Board, June 22, the following officers were reelected: Dr. Darner, President; Dr. C. Willard Camalier, Jr., First Vice President; Mr. George B. McGovern, Secretary; Mr. Theodore Wiprud, Assistant Secretary; and Mr. Douglas R. Smith, Treasurer. Dr. W. Leonard Weyl was elected Second Vice President.

The Annual Meeting of the American Cancer Society, District of Columbia Division, June 10, was highlighted with the presentation of the **St. George Medal and Citation to Dr. Ernest A. Gould**, well known Washington surgeon and President of the Medical Staff of the Washington Hospital Center, where the meeting was held. This award is made annually for outstanding contributions to cancer control. Dr. Gould was recognized for his 14 years of volunteer service and especially for his interest in the Society's programs of service to cancer patients.

Thirteen volunteers were recognized for having served in the cause of cancer control for more than 10 years. They included 3 physicians, Drs. C. Roger Kurtz, Lois I. Platt and Cyril A. Schulman. Each received an attractive plaque.

New electees to the Board of Trustees included Dr. LaSalle D. Leffall. Among those reelected to the Board for a 3-year term were Drs. S. Joseph Cosimano, Jr., Edward E. Ferguson, Murray Grant, William P. Herbst, Jr., Calvin T. Klopp, William T. Lady, John L. Parks, Lois I. Platt, Cyril A. Schulman, and Warren J. Strudwick.

Mr. Leonard J. Emmerglick, Washington attorney, was reelected President of the Society at the meeting of the Board of Trustees which followed the annual meeting. Drs. Gould, Kurtz, Peter D. Comanduras, also Messrs. John H.



DR. ERNEST A. GOULD (left) receives the St. George Medal and Citation for outstanding contributions to cancer control from Mr. Leonard J. Emmerglick, President of the D. C. Division of the American Cancer Society.

Feeney and Frank H. Weitzel, were elected Vice Presidents. Among those named to the Society's Executive Committee, in addition to the officers, were Drs. Cosimano, Ferguson, Parks, Robert S. Jason, Lorin E. Kerr, and John F. Potter.

Mr. Ralph E. Pfeiffer, Jr., Chairman of the 1965 Cancer Crusade, reported to the members that the greatest amount in the history of the local Cancer Society had been received in contributions, with the total exceeding the \$470,000 goal.

A new award was announced at the **Annual House Staff Dinner of the Washington Hospital Center**, June 12, namely, the establishment of the **Ernest Alva Gould Surgical House Officer Award** to be given annually in honor of Dr. Gould, senior attending in surgery and President of the Medical Staff. Dr. Gould was presented with a scroll which cited him for his dedication to the medical profession and for his contributions to the advancement of surgical knowledge and skills. Recipient of the first Gould Award was Dr. Anton Dowli, who received a check for \$100. Dr. Dowli is senior resident in general surgery.

The Gold-headed Cane was presented this year to **Dr. G. Victor Simpson**.

Winners of the Harry Hyland Kerr Essay Awards were: First Award: Dr. Margaret Abernethy, intern in medicine; a special award to Dr. Florencio Bello, of the Department of Otolaryngology, for producing an 8 mm. color motion picture film on "Control of Epistaxis by the Foley Catheter"; Second Award: Dr. Walter J. Lewis, first-year resident in medicine; Third Award: Dr. John Chiocca, third-year resident in

medicine; and Honorable Mention: Dr. Giulio Scazzella, second-year resident in urology.

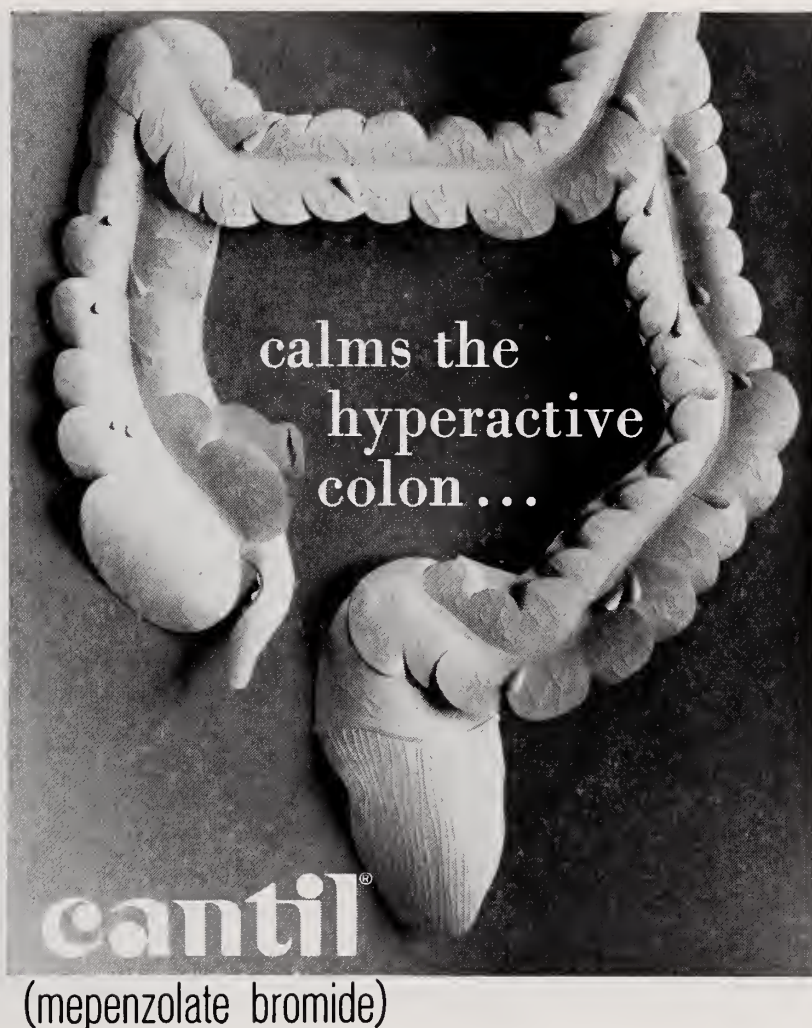
Although smallpox vaccination for all areas of international travel, and cholera immunizations for some areas are the only ones required, the Public Health Service also recommends that immunization against tetanus, diphtheria, and polio be brought up to date, and suggests immunization against typhoid for most international travel.

Effective April 7, **the American Medical Association** announced that the Division of Environmental Medicine and Medical Services be changed to the **Division of Socio-Economic Activities**. This Division encompasses the Departments of Biostatistics, Community Health and Health Education, Economics, Environmental Health, Governmental Medical Services, Hospitals and Medical Facilities, and Occupational Health.

The American Academy of Compensation Medicine is striving to increase its membership. The principal objectives of this organization are to establish meaningful standards of practice and ethics in this field; to develop appropriate medical criteria for the determination of the relationships among injury, disease and disability; and to take action on all other problems encountered by physicians in the practice of compensation medicine under the various state workmen's compensation laws. Information about the Academy and requirements for membership may be secured by addressing the Academy at Box 180, Radio City Station, New York, N. Y. 10019.

A **"Guide to Washington for the Physically Handicapped"** has just been published by the Architectural Barriers Project of the Washington Metropolitan Area. The booklet lists hospitals, hotels, restaurants, theaters, churches, libraries and many other facilities in the Washington area, indicating those which have been found accessible and usable by a person in a wheel chair. Where such information is available, the directory states if an attendant is available to park the car, if leader dogs are allowed, whether there are ramps or steps at the entrance, the width of bathroom doorways, and other pertinent information.

Copies of the booklet are available at 25 cents each to cover handling and postage. They may be secured from the D. C. Society for Crippled Children, 2800 13th Street, N.W., Washington,



helps restore normal motility and tone

Cantil (mepenzolate bromide) works in the colon. In irritable colon, spastic colon, ulcerative colitis and other functional and organic colonic disorders, it acts to:

- control diarrhea/constipation
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IN BRIEF:

One or two tablets three times a day and one or two at bedtime usually provide prompt relief. Cantil with Phenobarbital may be prescribed if sedation is required.

Dryness of the mouth or blurring of vision may occur but it is usually mild and transitory. Urinary retention is rare. Caution should be observed in prostatic hypertrophy—withhold in glaucoma. Cantil with Phenobarbital is contraindicated in patients sensitive to phenobarbital.

Supplied: CANTIL (mepenzolate bromide)—25 mg. per scored tablet. Bottles of 100 and 250.

CANTIL with PHENOBARBITAL—containing in each scored tablet 16 mg. phenobarbital (warning: may be habit forming) and 25 mg. mepenzolate bromide. Bottles of 100 and 250.

1-Riese, J.A.: Amer. J. Gastroent. 28:541 (Nov.) 1957



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D. C. 20009. To have a facility listed in the next edition of this publication write to the same address.

The Architectural Barriers Project is part of a nationwide attack on architectural barriers sponsored by the National Society for Crippled Children and Adults and the President's Committee on Employment for the Handicapped. The local Committee is sponsored by the D. C. Commissioners' Committee on Employment of the Handicapped, the D. C. Society for Crippled Children, and the Crippled Children's Societies of Prince George's County and Northern Virginia. The publication of this guidebook is only one of many projects aimed toward the maximum possible participation by handicapped citizens in the business, social and political life of the community.

The Association of American Medical Colleges has selected 28 junior and senior U.S. medical students to receive **Foreign Fellowships** which will enable them to obtain supervised medical experience in relatively underdeveloped areas of the world. These Foreign Fellowships are made possible by Smith, Kline & French Laboratories, of Philadelphia. The students will spend at least 10 weeks with their foreign sponsors. The 1965 winners include James C. O. Harris, Jr., of Silver Spring, Md., a junior at George Washington University School of Medicine. He will work at the CARE/MEDICO Mission in Kuala Lipis, Malaysia.

The facility at Kuala Lipis is a 173-bed general hospital in an area with a population of more than 40,000 Malays, Chinese and Indians. About 6,000 outpatients are treated monthly at the hospital and at road clinics and riverboat dispensaries. Mr. Harris will receive credit toward his medical degree through these duties.

"Collegia Medica Squibb," the creation of a collection of original oil paintings of the 83 medical colleges of America, is a new, long-range project of E. R. Squibb and Sons, pharmaceutical house of New York City. The unveiling of the first painting, that of the main entrance of the Jefferson Medical College of Philadelphia, was a recent event at the Racquet Club of that city. The artist commissioned to do the painting was Ben Eisenstat, of Philadelphia.

Mr. George S. Squibb, Vice President, in presenting the painting to Dean William A. Sodeman, called attention to the fact that his great grandfather, Dr. Edward Robinson Squibb, received his

medical degree at Jefferson over a century ago. This institution was also chosen as the first subject, he said, "since more physicians practicing today graduated from Jefferson than from any other medical college." The "Collegia Medica" program was undertaken after consultation with the American Medical Association, the Association of American Medical Colleges, and the Student American Medical Association.

The Washington Psychoanalytic Society, at its business meeting, June 14, elected the following officers:

Dr. Robert C. Burnham, *President*; Dr. Oscar Legault, *President-elect*; Dr. Milton Meltzer, *Secretary*; and Dr. David Eden, *Treasurer*.

They will serve for a 2-year term.

New officers of the **D. C. Dental Society,** elected June 8, are: Dr. Balfour D. Mattox, *President-elect*; Dr. Hector E. Castro, *Vice President*; Dr. James J. Connors, *Secretary*; and Dr. Ashur G. Chavoor, *Treasurer*. Dr. Morton O. Alper took office as *President* of the Dental Society.

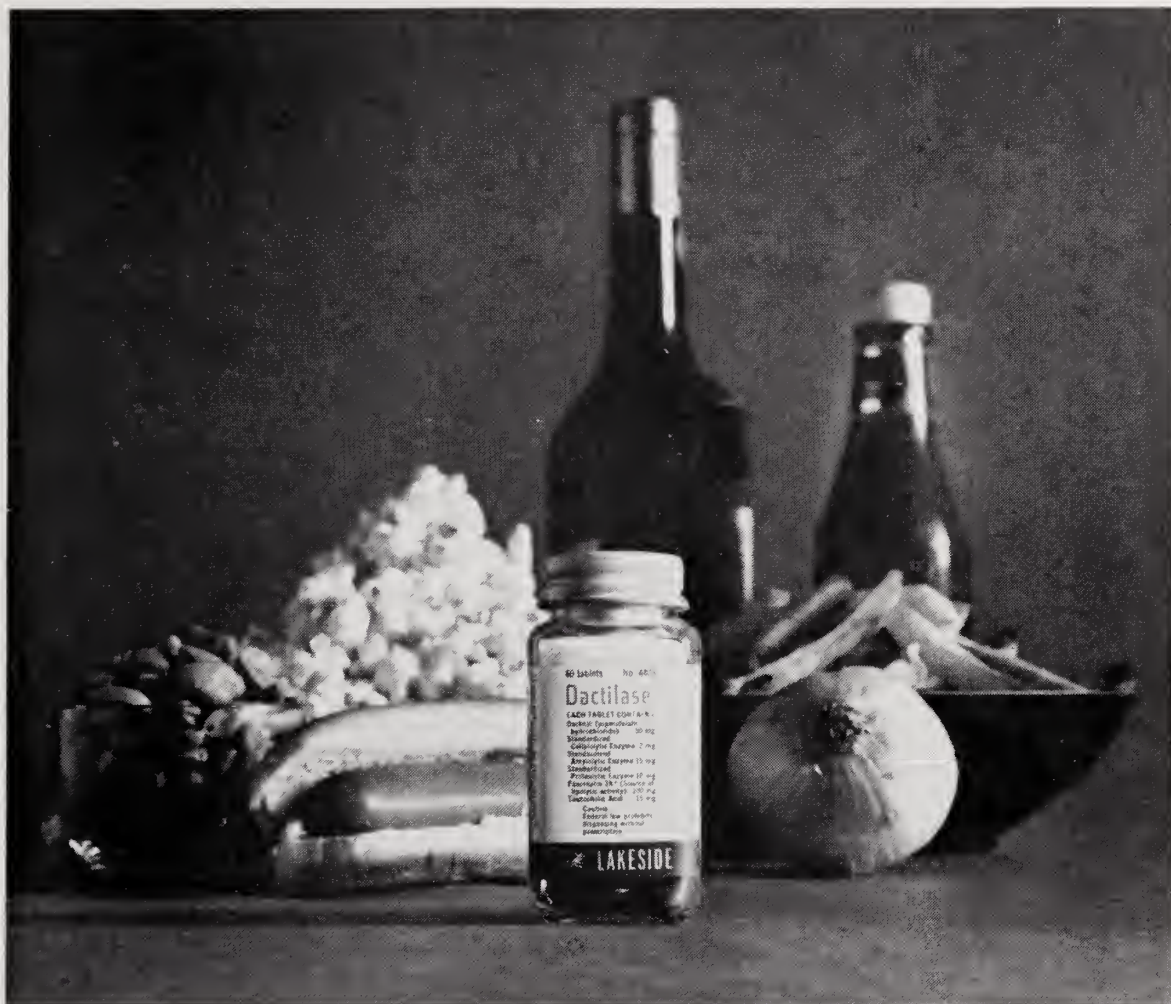
The newly elected **President of the National Capital Area Health and Welfare Council** is **Mr. Robert T. Keith,** *Vice President* of the Washington Gas Light Company.

The District of Columbia-Metropolitan Area Society of Plastic Surgery, which is now an official section of the American Society of Plastic and Reconstructive Surgery, Inc., announces election of the following officers:

Dr. John E. Alexander, *President*; Dr. J. Gordon Bell, *Vice President*; Dr. Alfred J. Suraci, *Secretary*; Drs. Arthur Dick and Nicholas M. Azzato, *members of Executive Committee*.

Dr. Dick, Past President of the Society, was recently elected *Vice President* of the American Society of Maxillo-facial Surgeons.

"Sickle Cell Anemia and Your Child," a brochure written primarily as a guide for parents of children afflicted with this blood disorder, now in its third printing, is authored by Dr. Roland B. Scott, an Active member of the D.C. Medical Society, and Dr. Althea D. Kessler. Single copies are available to physicians upon request to Dr. Scott at the Department of Pediatrics, Howard University College of Medicine, Washington, D.C. 20001.



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Administration and Dosage: One tablet with, or immediately following each meal. Tablets should be swallowed whole.

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"**Cancer of the Larynx**" is the latest pamphlet in the revised series on cancer of the different body sites, prepared by the National Cancer Institute. Single copies (PHS Publication No. 1284) are available without charge from the Public Health Service, Washington, D.C. 20201.

Dr. James Richard Patrick has been appointed **Director of Pathology at Children's Hospital**. A graduate of Yale University School of Medicine, he has recently been Associate Pathologist at Los Angeles Children's Hospital and Assistant Professor of Pathology at the University of Southern California. He is Board-certified in both pediatrics and anatomical pathology.

Brig. General James T. McGibony has been appointed **Deputy Surgeon General of the Army**, succeeding Brig. General Conn L. Milburn, Jr. The appointment became effective, May 15. General Milburn will head the Brooke General Hospital at Fort Sam Houston, Texas.

Ten medical students have received **fellowships for research in clinical nutrition**, given by the Council on Foods and Nutrition of the American Medical Association. One of the awards, which were \$600 each, went to a Washington student, Hazel C. Jefferies, of Howard University College of Medicine. Her topic for investigation was "Iron Deficiency Anemia in Anemic Negro Adolescents." Her senior investigator was Dr. Roland B. Scott, Professor of Pediatrics at Howard.

Georgetown University School of Medicine will receive a grant of \$2,015,837 under the Health Professions Educational Assistance Act of 1963, which is administered by the Public Health Service. This is one of 8 construction grants approved for the expansion and remodeling of educational facilities for the health professions.

Several Washington area medical institutions were listed as beneficiaries in the will of the late Isabel Valle Brookings, wife of the Washington philanthropist and financier, Robert S. Brookings. Among the recipients of gifts, which totaled more than \$900,000, were the following: Washington Hearing Society, \$5,000; Children's Hospital Hearing and Speech Center, \$25,000; Ophthalmology Department, Washington Hospital Center, \$25,000; Washington Hospital Center, \$25,000, to be used in accordance with the wishes of Dr. Worth B. Daniels, the personal physician of the deceased.

Mr. Gerald G. Gross, Editor of *Washington Report on the Medical Sciences*, died, June 21, at the Bethesda Naval Hospital. During the 17 years he reported on medical and other scientific news for *The Washington Post* he was a regular attendant at the Society's scientific meetings and became known to many Washington physicians.

During World War II he served in the Navy's Bureau of Medicine and Surgery as an aide to Admiral Ross T. McIntire. Commissioned a Lieutenant (j.g.) in 1942, he retired with the rank of Commander in 1946. In 1947 he founded the *Washington Report on the Medical Sciences*, a 4-page weekly letter covering medical and political news in and around the Capital area. The esteem in which he was held by his colleagues was evident in the *Report* of June 21, which was compiled by a board of editors who offered to keep WRMS going while "Jerry" was convalescing.

Personals

Dr. John R. Pate, Director of the Bureau of Disease Control of the D. C. Health Department since 1953, was installed as President of Civitan International, a service organization, during banquet ceremonies, June 30, at the Sheraton-Park Hotel.

Dr. Pate has been active in all phases of Civitan work both as a member and officer. He served as Vice President of Civitan International in 1962 and 1963 and as President-elect the past year. He was "Civitan of the Year" of the Chesapeake District in 1958. Both Dr. Pate and his wife, Dr. Alice Chenoweth, are Active members of the D. C. Medical Society.

Dr. William P. Herbst was elected to the Council of the American Association of Genitourinary Surgeons at its meeting in New Orleans, May 5. On May 12, at a meeting held in the same city, he was reappointed Chairman of the Research Committee of the American Urological Association.

Dr. George H. McLain received the 1965 Achievement Award of the Sibley Medical Association at a dinner at the Washington Hilton, May 20. He was cited for his long and loyal devotion to the Hospital. Dr. McLain served both his internship and residency, the latter in surgery, at Sibley, following his graduation from

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Administration and Dosage: One or two teaspoonfuls 3 times a day before meals. If flushing is objectionable, dosage may be lowered. However, tolerance to flushing usually develops without loss of efficacy in regard to vasodilation.

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George Washington University School of Medicine in 1929.

Dr. Ralph G. Beachley, who retired July 1 as Director of Public Health of Arlington County, Virginia, is the recipient of the 1965 Annual Welburn Award of the Arlington County Medical Society.

Dr. Beachley was also honored, June 5, when the Arlington County Board passed a resolution in recognition of his 27 years of service as Director of its Health Department and congratulated him on his retirement. The resolution cited him for "meticulous management" and credited him with setting public health standards in Arlington County which are rated "among the highest in the United States."

Dr. Peter D. Comanduras, co-founder of MEDICO with the late Dr. Thomas Dooley, received the organization's third annual World Humanitarian Award, June 21, at the New York Hilton Hotel.

Dr. Everett J. Gordon was recently appointed Clinical Associate Professor of Orthopedic Surgery at Georgetown University School of Medicine. He has also been appointed to serve as a consultant on problems of the back which are submitted to the Questions and Answers section of *The Journal of the American Medical Association*.

Dr. William Battaile has been named Coordinator of Medical Services, a new post which will coordinate the medical services of Sibley Memorial Hospital and Georgetown Medical School under Dr. Battaile's direction. Dr. Battaile is Assistant Director of the Sibley Pathological Laboratory.

Dr. A. A. Marchetti was named to succeed Dr. Robert H. Barter on the Advisory Council for Obstetrics and Gynecology of the American College of Surgeons. The appointment was made at a meeting of the Executive Board of the American College of Obstetricians and Gynecologists in San Francisco, April 1.

Dr. Robert E. Collins has won a scholarship from the National Society for Crippled Children and Adults for specialized training in treating the handicapped. The award will enable him to pursue an advanced course in the treatment of children with cerebral palsy at the Children's Rehabilitation Institute at Reisterstown, Md.

The Class of 1915 of the Georgetown University School of Medicine was feted in ceremonies at the University on Saturday, June 5. Among those given 50-year citations were **Drs. William F. Greaney, William P. Herbst, Jr., A. Magruder MacDonald, Fred R. Sanderson, Maurice A. Selinger, and Harry A. Spigel**, all Life members of the D. C. Medical Society, and **Dr. Thomas Parran**, of Pittsburgh, an Honorary member of the Society.

Drs. Clifton R. Brooks, Robert W. Langevin and Alan M. Weintraub are new Fellows of the American College of Chest Physicians. They were inducted into fellowship in convocation ceremonies, June 20, during the 31st Annual Meeting of the College at the Waldorf-Astoria Hotel in New York City.

Certified by the American Board of Cardiovascular Disease at its April meeting in Chicago were **Drs. James M. Bacos, Rashid A. Massumi, Jack P. Segal and Stanley M. Silverberg**.

Obituaries

**Robert Ammiel Hare, B.A.,
M.A., M.D., F.A.C.P.**

(1889-1965)

DR. ROBERT A. HARE, formerly Medical Director of the Washington Sanitarium and Hospital, died, May 29, 1965, in Walla Walla, Washington, while visiting a son. He lived at 809 Davis Avenue, Takoma Park, Md.

Dr. Hare was born in Kukuparare, New Zealand, December 5, 1889. He came to the United States at the age of 17 years to attend school. He received his undergraduate degree in 1910 from Union College in Lincoln, Nebraska, and for the next 10 years served as an educator at schools of the Seventh-Day Adventists located in Minnesota and California. He earned his Master's degree in history at the University of California in 1921, and a year later began his medical studies at the College of Medical Evangelists in Loma Linda, California.

Receiving his medical degree in 1925, he interned at Santa Barbara, Calif., then for 2 years served on the staff of the Hinsdale (Illinois) Sanitarium and Hospital. From 1928 to 1938 he maintained a general practice in Santa Barbara.

WHEN MOTHER'S IRON ISN'T UP TO MOTHERHOOD

IN BRIEF: ACTIONS AND USES: A single dose of Imferon (iron dextran injection) will measurably begin to raise hemoglobin and a complete course of therapy will effectively rebuild iron reserves. The drug is indicated only for specifically-diagnosed cases of iron deficiency anemia and then only when oral administration of iron is ineffective or impractical. Such iron deficiency anemia may include: patients in the last trimester of pregnancy; patients with gastrointestinal disease or those recovering from gastrointestinal surgery; patients with chronic bleeding with continual and extensive iron losses not rapidly replenishable with oral iron; patients intolerant of blood transfusion as a source of iron; infants with hypochromic anemia; patients who cannot be relied upon to take oral iron.

COMPOSITION: Imferon (iron dextran injection) is a well-tolerated solution of iron dextran complex providing an equivalent of 50 mg. of elemental iron in each cc. The solution contains 0.9% sodium chloride and has a pH of 5.2-6.0. The 10 cc. vial contains 0.5% phenol as a preservative.

ADMINISTRATION AND DOSAGE: Dosage, based upon body weight and Gm. Hb./100 cc. of blood, ranges from 0.5 cc. in infants to 5.0 cc. in adults, daily, every other day, or weekly. The total iron requirement for the individual patient is readily obtainable from the dosage chart in the package insert. Deep intramuscular injection in the upper outer quadrant of the buttock, using a Z-track technique, (with displacement of the skin laterally prior to injection), insures absorption and will help avoid staining of the skin. A 2-inch needle is recommended for the adult of average size.

SIDE EFFECTS: Local and systemic side effects are few. Staining of the skin may occur. Excessive dosage, beyond the calculated need, may cause hemosiderosis. Although allergic or anaphylactoid reactions are not common, occasional severe reactions have been observed, including three fatal reactions which may have been due to Imferon (iron dextran injection). Urticaria, arthralgia, lymphadenopathy, nausea, headache, and fever have occasionally been reported. Initial test doses of 0.5 cc. are advisable.

PRECAUTIONS: If sensitivity to test doses is manifested, the drug should not be given. Imferon (iron dextran injection) must be administered by deep intramuscular injection only. Inject only in the upper outer quadrant of the buttock, not in the arm or other exposed area.

CONTRAINDICATIONS: Imferon (iron dextran injection) is contraindicated in patients sensitive to iron dextran complex. Since its use is intended for the treatment of iron deficiency anemia only, it is contraindicated in other anemias.

CARCINOGENICITY POTENTIAL: Using relatively massive doses, Imferon (iron dextran injection) has been shown to produce sarcoma in rats, mice and rabbits and possibly in hamsters, but not in guinea pigs. The risk of carcinogenesis, if any in man, following recommended therapy with Imferon (iron dextran injection) appears to be extremely small.

SUPPLIED: 2 cc. ampuls, boxes of 10; 5 cc. ampuls, boxes of 4; 10 cc. multiple dose vials.

in iron deficiency anemia for rapid and predictable replacement of iron reserves

imferon[®]
(iron dextran injection)



Dr. Hare headed the Washington Sanitarium and Hospital in Takoma Park, Md., for 17 years, from 1938 to 1955, and continued on the medical staff until his death.

A diplomate of the American Board of Internal Medicine, he was a member and Past President of the Montgomery County (Maryland) Medical Society, a Fellow of the American College of Physicians, and a member of the American Medical Association, the Medical and Chirurgical Faculty of Maryland, and the American Heart Association. He was an Associate member of the D.C. Medical Society from 1939 until 1960.

His wife, Mrs. Alfreda Emerson Hare, died in January of this year. He leaves 2 sons, Gordon Hare, of Walla Walla, and Dr. Donald Hare, of Long Beach, Calif.

Carcinoma of Prostate—Matias, Shnider and Gold

(Continued from page 370)

In 6 cases the original carcinoma arose in the prostate gland. The remaining cases included a variety of carcinomas as the primary lesion. In 33 out of the 97 cases reviewed by Clausen and Poulsen the involvement of the jaw was one of the first manifestations of the tumor. In the present case this finding was a late development. While bony metastases from prostatic carcinoma are usually osteoblastic, this case had extensive lytic destruction in the mandible in association with extensive osteoblastic metastases in the pelvis and vertebrae.

Summary

A case of carcinoma of the prostate has been presented with an unusual metastatic involvement of the jaw. The presence of metastatic involvement of the mandible can easily be missed in the absence of signs or symptoms which call attention to its presence.

For reprints, address: Dr. Shnider
Georgetown University Medical Division
District of Columbia General Hospital
Washington, D. C. 20003

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William Thornton—Goldstein

(Continued from page 376)

"Gallant gentleman—full of talent and eccentricity—a physician by profession, a painter, a poet, and a horse racer—well acquainted with mechanic arts. He was a 'man of infinite humor'—humane and generous, yet fond of field sports—his company was a complete antidote to dullness." 5

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Medicolegal Abstracts—Montgomery

(Continued from page 391)

Tattooing Taboo: The New York City Health Code prohibits tattooing of a human being except by physicians for medical purposes. This regulation was attacked as unconstitutional but upheld by an intermediate appellate court because it was adopted for the purpose of protecting public health.

Evidence indicated that the incidence of serum hepatitis is 7 times higher in tattooed persons than in the population as a whole. Furthermore, that incidence did not drop after regulations were passed in 1959 to set standards for tattooing and to try to achieve aseptic technique.

The court held that this prohibition is a valid exercise of the police power for the protection of the public health.

COMMENT: Again, the weight of reasonable judgment will doubtless support this court decision. It is clear that some legislative powers are necessary in order to protect public health. Possibly physicians need mainly to guard carefully against abuses or unreasonable extensions of this prerogative.

ROBERT R. MONTGOMERY, M.D.

the price of “success”

190

102

Hypertension has been called the price of success... and in some life-situations, the cost of failure. In either event, Metatensin lowers blood pressure, cushions the patient against stress and retards the progress of disease. Metatensin is effective and economical. It is well-tolerated over long periods.

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In Brief: Patients with hepatic cirrhosis or diarrheal syndromes, or under therapy with digitalis, ACTH, or potassium-losing steroids, should be observed for signs of hypokalemia. With thiazides, electrolyte depletion, diabetes, gout, granulopenia, nausea, pancreatitis, cholestatic jaundice, flushing, mild muscle cramps, constipation, photosensitivity, acute myopia, perimacular edema, paresthesias, neonatal bone marrow depression in infants of mothers who received thiazides during pregnancy, skin rash or purpura with or without thrombocytopenia, may occur. With reserpine, untoward effects may include depression, peptic ulcer and bronchial asthma. Withdraw medication at least 7 days prior to electroshock therapy, 2 weeks prior to elective surgery. Contraindications are complete renal shutdown, rising azotemia or development of hyperkalemia or acidosis in severe renal disease.

Supplied: Metatensin tablets, 2 mg., 4 mg. — bottles of 100 and 1000.



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BOOK REVIEWS

Ciba Foundation Colloquia on Endocrinology, volume 15. Aetiology of Diabetes Mellitus and Its Complications. Edited by MARGARET P. CAMERON, M.A., AND MAEVE O'CONNOR, B.A. Price, \$12.50. Pp. 405, with 85 illustrations. Boston: Little, 1964.

This is an outstanding symposium by international authorities on diabetes mellitus. Items discussed included inheritance patterns and association of elevated alpha-2 serum proteins among prediabetic and chemically diabetic animals, along with current pathologic and histochemical findings. Data were presented suggesting that the condition of the endocrine pancreas in obese and diabetic subjects may result from over-secretion of the growth hormone by the anterior hypophysis.

Leucine-induced hypoglycemia was compared to the action of sulphonylurea. The possibility of the occurrence of inflammatory processes limited to the islets of Langerhans was considered and the expression "insulinitis" was coined for the very recent onset of acute juvenile diabetes.

Consideration of plasma insulin concentrations in relation to the degree of impairment of glucose tolerance led to some interesting conclusions. There was considerable discussion on insulin antagonism. In particular, the chapter on Synalbumin by J. Vallance-Owen made exciting reading.

Evidence was presented for a reciprocal relationship between glucose and fatty acid metabolism. The name glucose fatty acid cycle was proposed for this relationship. In human diabetes the relationship is disturbed so that release of fatty acids from glycerides is enhanced at plasma concentrations of glucose and insulin which suppress the release of fatty acids in normal people.

The biochemistry of blood vessels, the glomerular lesion, pathophysiology of microangiopathy, and the role of the pituitary in diabetes were handled in such a way as to complete a symposium of unusual breadth.

SAMUEL J. N. SUGAR, M.D.

Current Therapy 1965. Latest Approved Methods of Treatment for the Practicing Physician. Edited by HOWARD F. CONN, M.D. Price, \$13.00. Pp. 801. Philadelphia: Saunders, 1965.

This is the seventeenth edition of this valuable, usually thorough, and authoritative textbook. The first edition was published in 1949, and each year extensive revisions have been made. In addition to the 12 consulting editors, there are 319 contributing authors, most of whom are well recognized experts in their various fields.

This edition is up-to-date and contains much valuable information on the most recent therapeutic advances. The therapy of each disease is discussed fully by one of the contributors, and frequently there are informative comments concerning the nature of the disease and laboratory and physical findings. The

volume is well organized and indexed. There are 15 different sections encompassing the various medical fields. In addition there is a section containing valuable miscellaneous information, including a roster of drugs and their composition, and a thorough discussion of the clinical features, laboratory findings, and therapy of many conditions causing fluid and electrolyte imbalance.

One of the fine features of this text is the usually thorough and practical approach of the various authors to their subjects. As one would expect, in a text of this nature, there are opinions as to therapy with which many will disagree. However, because of the excellent selection of authors and editors the amount of controversial material is very small. This is an excellent review of current therapy and is highly recommended to those interested in the treatment of medical disease.

ARTHUR BURGERMAN, M.D.

Surgery of the Breast. LOUIS H. JORSTAD, M.D., F.A.C.S., F.I.C.S. With the collaboration of MEREDITH JORSTAD PAYNE, M.D., F.A.C.S. Price, \$15.00. Pp. 220, with 37 line drawings by W. R. Schwarz and 33 photographs, including 5 in full color. St. Louis: Mosby, 1964.

This volume of 200 pages presents in an easily read style a complete survey of diseases and surgery of the breast. The authors quote numerous authorities and give personal opinions based on a large experience.

There are chapters on anatomy, physiology and physical examination. Micropathology is not discussed. Adequate drawings and photographs illustrate the text, which is supplemented by an extensive bibliography. The junior author presents a very complete section on plastic procedures.

This text is an excellent review of current thoughts in this field for anyone interested, whether surgeon or internist. The personal opinions on controversial points are especially welcome.

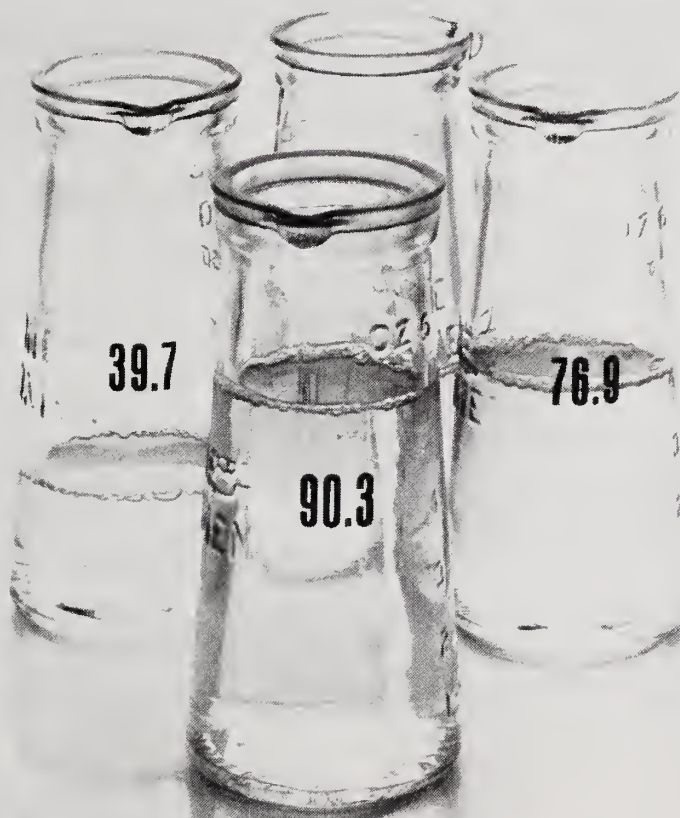
BENJAMIN GOLDEN, M.D.

Common Bacterial Infections. Pathophysiology and Clinical Management. COLONEL EDWIN J. PULASKI, M.C., U.S. ARMY. Price, \$8.50 Pp. 301, with 50 illustrations. Philadelphia: Saunders, 1964.

Physicians in the Washington area who are familiar with the work and interests of Colonel Edwin J. Pulaski have been looking forward to the appearance of his book, "Common Bacterial Infections." They will not be disappointed.

In 301 pages Colonel Pulaski has chosen to emphasize both the pathologic physiology and the clinical management of diseases encompassed by the title. After a lucid opening chapter on dynamics of infection Colonel Pulaski compresses into 40 pages the important aspects on virtually every antimicrobial agent of value today including such recently developed ones as cephalothin, ampicillin and cloxacillin.

(Continued on page 32)



approximating the diuretic efficacy of meralluride

METAHYDRIN[®] (trichlormethiazide)

To determine the relative efficacy of thiazide diuretics in congestive heart failure, Metahydrin (trichlormethiazide) and three other thiazides were measured against Mercuhydrin[®] (meralluride injection)—the standard diuretic. "The results leave little doubt that the diuretic efficacy, that is, the 'ceiling effect' in these terms, is not the same for different thiazides."* The assays ranged from about 40% of the effectiveness of Mercuhydrin through 67%, 77% to 90% for Metahydrin. The latter two values were thought to be significantly different from the lowest value and to be therapeutically important.

*Gold, H., *et al*: Closed Panel Conference: Present Status of the Management of Congestive Failure and Advances in Diuretic Therapy, *Journal of New Drugs*, 1:177, July-August, 1961.

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IN BRIEF: ADMINISTRATION AND DOSAGE: One 2 mg. or 4 mg. tablet once or twice daily. In acute, severe decompensation, Mercuhydrin[®] (meralluride injection) may be necessary initially.

PRECAUTIONS: As with all effective diuretics, vigorous therapy may produce electrolyte depletion. Patients with severely reduced renal function should be observed carefully since thiazides may be contraindicated. Care should be taken with patients predisposed to diabetes or gout. Patients with a tendency to potassium deficiency, as in hepatic cirrhosis or diarrheal syndromes, or those under therapy with digitalis, ACTH, or certain adrenal steroids, also should be watched carefully.

SIDE EFFECTS: Nausea, flushing, constipation, skin rash, muscle cramps and gastric discomfort have been occasionally noted; rarely thrombocytopenia and bone marrow depression, photosensitivity, cholestatic jaundice, pancreatitis, perimacular edema, gout and diabetes have been caused by administration of thiazides.

CONTRAINDICATIONS: Complete renal shutdown; rising azotemia or development of hyperkalemia or acidosis in severe renal disease; demonstrated hypersensitivity.

HOW SUPPLIED: Bottles of 100 and 1000 tablets.

Book Reviews

(Continued from page 30)

Probably the most useful chapters in the book, and representing Colonel Pulaski's special field of competence, are those on the infectious aspects of trauma and burns. The etiologic agents are not remarkably different from those encountered in a general medical ward, but the special milieu in which they are found and the combined surgical-chemotherapeutic approach present special problems. Physicians with particular interests or responsibility for infectious disease are generally internists or pediatricians who can especially profit from the information in these chapters. Pyogenic infections of the skin and abdominal structures are chapters similarly helpful (48 pages are devoted to the latter).

Rather remarkable in contrast is the briefer discussion of bacterial pneumonia (limited to 4 pages) and to urinary tract infections (18 pages). It may be dismaying to some readers that typhoid fever is not discussed (or even listed in the index), though the author can rightly counter that this is no longer a common bacterial disease. He has also elected to omit any discussion of gonococcal venereal disease. Word has it that this bacterial disease is still "common," even in the Army.

There is excellent photographic and other illustrative visual material (graphs, line sketches, and occasional histologic drawings). There is a good index and the book is attractively bound. The price is pleasantly low.

JOHN P. UTZ, M.D.

Scintillation Scanning in Clinical Medicine.

Based on a Symposium sponsored by the Department of Radiology of the Bowman Gray School of Medicine. JAMES L. QUINN III, M.D., Editor. Price, \$11.50. Pp. 278, illustrated. Philadelphia: Saunders, 1964.

The procedure of mapping the distribution of a radioactive substance in the human body has come to be known as scanning. At times scanning can provide information unobtainable by other diagnostic methods.

This book is a collection of papers and panel discussions originally presented January 30 and 31, 1964, at the Symposium on Scintillation Scanning held at the Bowman Gray School of Medicine, Winston Salem, N. C.

This collection makes a comprehensive monograph of up-to-date information in this relatively new and rapidly moving field.

Various techniques and every organ in which scanning may play a significant role are discussed in great detail. The section on brain scanning was found particularly valuable by this reviewer.

This collection of papers is not for those who already are working daily in the field of isotopes but is recommended for family physicians, general radiologists, internists, general surgeons and neurodiagnosticians.

MARTIN A. THOMAS, M.D.



Ciba Foundation Symposium: Control of Glycogen Metabolism. W. J. WHELAN, Ph.D., D.Sc., F.R.I.C., Consulting Editor, AND MARGARET P. CAMERON, M.A., Editor for The Ciba Foundation. Price, \$12.50. Pp. 434, with 72 illustrations. Boston: Little, 1964.

This monograph, reporting the proceedings of a Symposium held in July of 1963, points up the ever-increasing knowledge of disease derived from basic investigation of metabolic processes. It consists of 3 parts. In the first the biochemistry of glycogen synthesis and degradation is discussed by such experts as Carl Cori, E. J. Bourne and L. F. Leloir. The second part presents the most recent information concerning hormonal regulation of glycogen synthesis and utilization and the energetics of these reactions. Included in this section is an excellent review of metabolic action of glucagon and its role in carbohydrate metabolism. The final section reviews the field of glycogen storage diseases.

On page 306 is an excellent table relating the classification of the various glycogen storage diseases to a specific enzyme defect and it briefly reviews the clinical manifestations of the specific disease. The introductory paper of this section by Rudi Schmid represents a valuable summary of these diseases and is highly recommended for all physicians needing concise, accurate information about the diseases associated with abnormalities of glycogen metabolism.

NORMAN C. KRAMER, M.D.

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**often relieves
mental pain
in 2-5 days**



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IN BRIEF:

Indications: In depression of any kind—neurotic and psychotic depressive reactions; manic-depressive or involutional psychotic reactions.

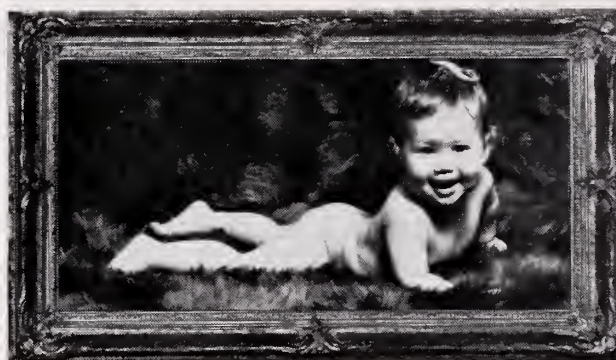
Contraindications and Precautions: Glaucoma, urethral or ureteral spasm, recent myocardial infarction, severe coronary heart disease and epilepsy. Should not be given within two weeks of treatment with a monoamine oxidase inhibitor. Safety in human pregnancy has not been established.

Adverse Effects: Side effects, usually mild, may

include: dry mouth, constipation, dizziness, palpitation, delayed urination, "bad taste," sensory illusion, tinnitus, agitation and stimulation, sweating, drowsiness, headache, orthostatic hypotension, flushing, nausea, cramps, weakness, blurred vision and mydriasis, rash, allergy, transient eosinophilia, granulopenia, altered liver function, ataxia and extrapyramidal signs.

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1—Pomeranze, J., and Gadek, R.J.: Am. Pract. & Digest Treat. 8:73-77 (Jan.) 1957

2—Asher, L.M.: Am. J. Digestive Diseases 4:272 (Apr.) 1959



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Side Effects: Dry mouth, blurring of vision or drowsiness may occur.

Contraindications: Withhold in glaucoma, bladder or g.i. obstruction, cardiac arrhythmias and in sensitivity to anticholinergics or phenobarbital (Piptal-PHB). Caution should be observed in patients with prostatic hypertrophy.

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PRECAUTIONS: Administer with caution to patients with incipient glaucoma or urinary bladder neck obstruction as in prostatic hypertrophy.

SIDE EFFECTS: Blurring of vision, dry mouth, difficult urination or flushing and dryness of the skin may occur at higher dosage levels, rarely at the usual dose.

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References: 1. Hock, C. W.: Clin. Med. 8:1932, 1961. 2. Marks, L.: Am. J. Gastroenterol. 27:180, 1957. 3. Palmer, W. L., and Kirsner, J. B.: Therapeutics in Internal Medicine, 2nd ed., F. A. Kyser, Ed., Hoeber, New York, 1953, p. 368. 4. Ryan, J. P., Jenkins, H. J. and Robinson, S. M.: J. Pharmaceut. Sciences 53(9):1084, 1964. 5. Vollmer, H.: Arch. Neurol. & Psychiat. 43:1057, 1940. Abst. J.A.M.A. 115:333, 1940. 6. Wharton, G. K., Balfour, D. C., Jr., and Osman, K. I.: Postgrad Med. 21:406, 1957.

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Dosage

The initial daily dosage in adults is 300-600 mg. in divided daily doses. In most instances, 400 mg. daily is sufficient for maximum therapeutic response. A trial period of one week is adequate to determine the effects of the drug; if there is no improvement, discontinue the drug. When improvement does occur, dosage should be promptly decreased to the minimum effective level: this should not exceed 400 mg. daily, and is often achieved with only 100-200 mg. daily.

Precautions

Before prescribing, the physician should obtain a detailed history and perform a complete physical and laboratory examination, including a blood count. The patient should be kept under close supervision and

should be warned to report immediately fever, sore throat, or mouth lesions (symptoms of blood dyscrasia), sudden weight gain (water retention); skin reactions; black or tarry stools. Regular blood counts should be made. The drug should be used with greater care in the elderly.

Warning: If coumarin-type anticoagulants are given simultaneously, the physician should watch for excessive increase in prothrombin time. Pyrazole compounds may potentiate the pharmacologic action of sulfonyleurea and sulfonamide-type agents and insulin. Patients receiving such concomitant therapy should be carefully observed for this effect.

Side effects

The most common side effects are nausea, edema and drug rash. Infrequently, agranulocytosis, generalized allergic reaction, stomatitis, salivary gland enlargement, vertigo and languor may occur. Leukemia and leukemoid reactions have been reported but cannot definitely be attributed to the drug. Thrombocytopenic purpura and aplastic anemia are also possible side effects. Confusional states, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hepatitis, jaundice, and several cases of anuria and hematuria. With long-term use, reversible thyroid hyperplasia may occur infrequently.

Contraindications

These include: edema, hypertension, or danger of cardiac decompensation; history or symptoms of peptic ulcer; renal, hepatic or cardiac damage; history of drug allergy;

history of blood dyscrasia. Because of the increased possibility of toxic reactions, the drug should not be given when the patient cannot be seen regularly, when the patient is senile, or when other potent chemotherapeutic agents are given concurrently. Large doses of Butazolidin® alkali are contraindicated in patients with glaucoma.

Note: The physician should be fully aware of dosage, precautions, side effects and contraindications as contained in the complete prescribing information.

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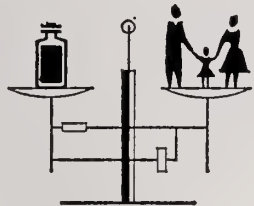
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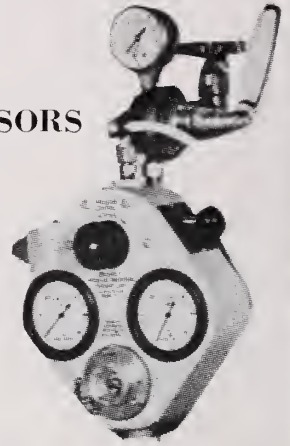
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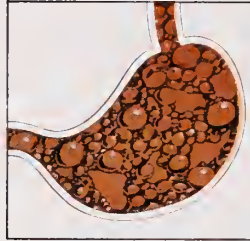
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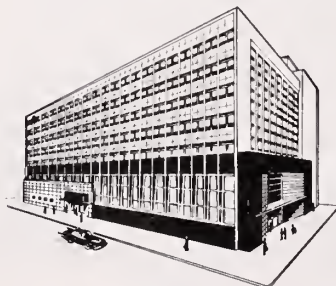


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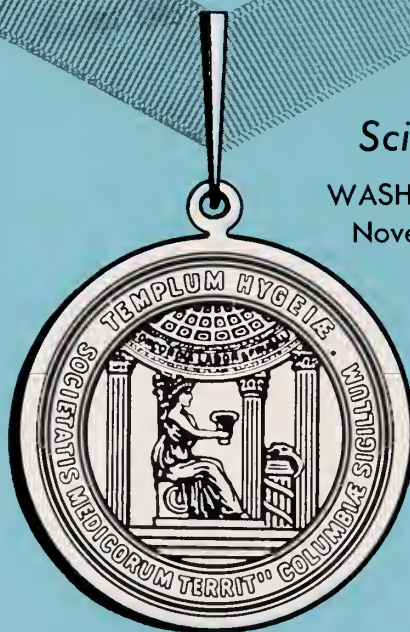
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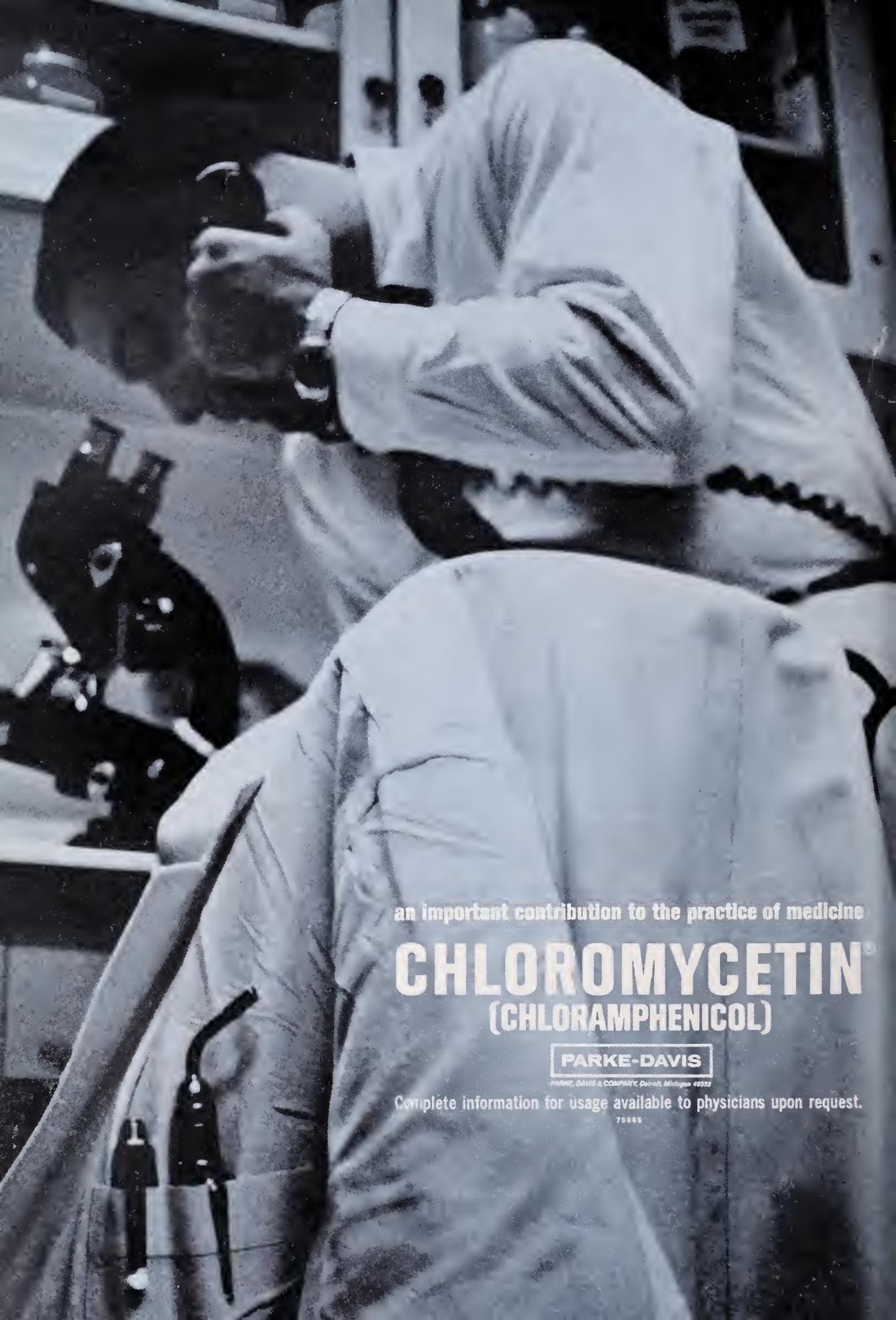
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BOOKS RECEIVED

Acknowledgment is made of the following books which have recently been received.

Surgery of the Parotid Gland. ROBIN ANDERSON, M.D., F.A.C.S., AND LOUIS T. BYARS, M.D., F.A.C.S. Price, \$12.75. Pp. 177, with 127 illustrations. St. Louis: Mosby, 1965.

Today's Health Guide. A Manual of Health Information and Guidance for the American Family. Edited by W. W. BAUER, M.D. Price, \$5.95. Pp. 624, with illustrations. Chicago: American Medical Association, 1965.

The Emerging Adventure in World Health. The Second Bronfman Lecture. LEONA BAUMGARTNER, M.D. Pp. 42. New York: American Public Health Association, 1963.

The Popes, the Pill, and the People. A Documentary Study. JOHN R. CAVANAGH, M.D., F.A.C.P., F.A.P.A., K.S.G. Price, \$3.75. Pp. 128. Milwaukee: Bruce, 1965.

Tracy's The Doctor as a Witness, 2nd ed. WILLIAM J. CURRAN, LL.M., S.M. Hyg. Price, \$5.75. Pp. 196. Philadelphia: Saunders, 1965.

Dorland's Illustrated Medical Dictionary, 24th ed. Price, \$13.00; deluxe edition, \$17.00. Pp. 1724. Philadelphia: Saunders, 1965.

Management of the Patient with Subnormal Vision. GERALD FONDA, M.D., F.A.C.S. Price, \$11.00. Pp. 161, with 88 figures. St. Louis: Mosby, 1965.

Synopsis of Cardiology. WILLIAM I. GEFTER, A.B., M.D., F.A.C.P., BERNARD H. PASTOR, A.B., M.D., F.A.C.P., AND RALPH M. MYERSON, B.S., M.D., F.A.C.P. Price, \$9.85. Pp. 877, with 240 illustrations. St. Louis: Mosby, 1965.

Problem Cases from Fracture Grand Rounds at the Massachusetts General Hospital. WILLIAM HAMILTON HARRIS, M.D., WILLIAM NORMAN JONES, M.D., AND OTTO E. AUFRANC, M.D. Price, \$20.00. Pp. 371, with 199 figures, including 5 in color. St. Louis: Mosby, 1965.

Surgery of the Biliary Passages and the Pancreas. WALTER HESS, Privatdozent Dr. med. (Zurich), Dozent of Surgery (Basle). Translated from the German by Heinrich Lamm, Dr. Med., F.A.C.S. Operative drawings by Ingrid Schaumburg. Price, \$25.00. Pp. 638, with 267 illustrations. Princeton: Van Nostrand, 1965.

Trauma to the Liver. Volume III in the Series, Major Problems in Clinical Surgery. GORDON F. MADDING, M.D., M.S. (Surgery), F.A.C.S., AND PAUL A. KENNEDY, M.D., F.A.C.S.; ENGLEBERT J. DUNPHY, M.D., Consulting Editor. Price, \$6.00. Pp. 134, illustrated. Philadelphia: Saunders, 1965.

(Continued on page 11)

Indications: Many types of edema involving retention of salt and water.

Contraindications: Hypersensitivity and most cases of severe renal or hepatic disease.

Precautions: Reduce dosage of concomitant antihypertensive agents by at least one-half. Discontinue if the BUN rises or liver dysfunction is aggravated. Electrolyte imbalance and potassium depletion may occur; take special care in cirrhosis or severe ischemic heart disease, and in patients receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended.

Side Effects: Agranulocytosis, constipation, dizziness, dysuria, headache, hyperglycemia, hyperuricemia, impotence, leukopenia, muscle cramps, nausea, postural hypotension, purpura, thrombocytopenia, transient myopia, urticaria, vomiting and weakness.

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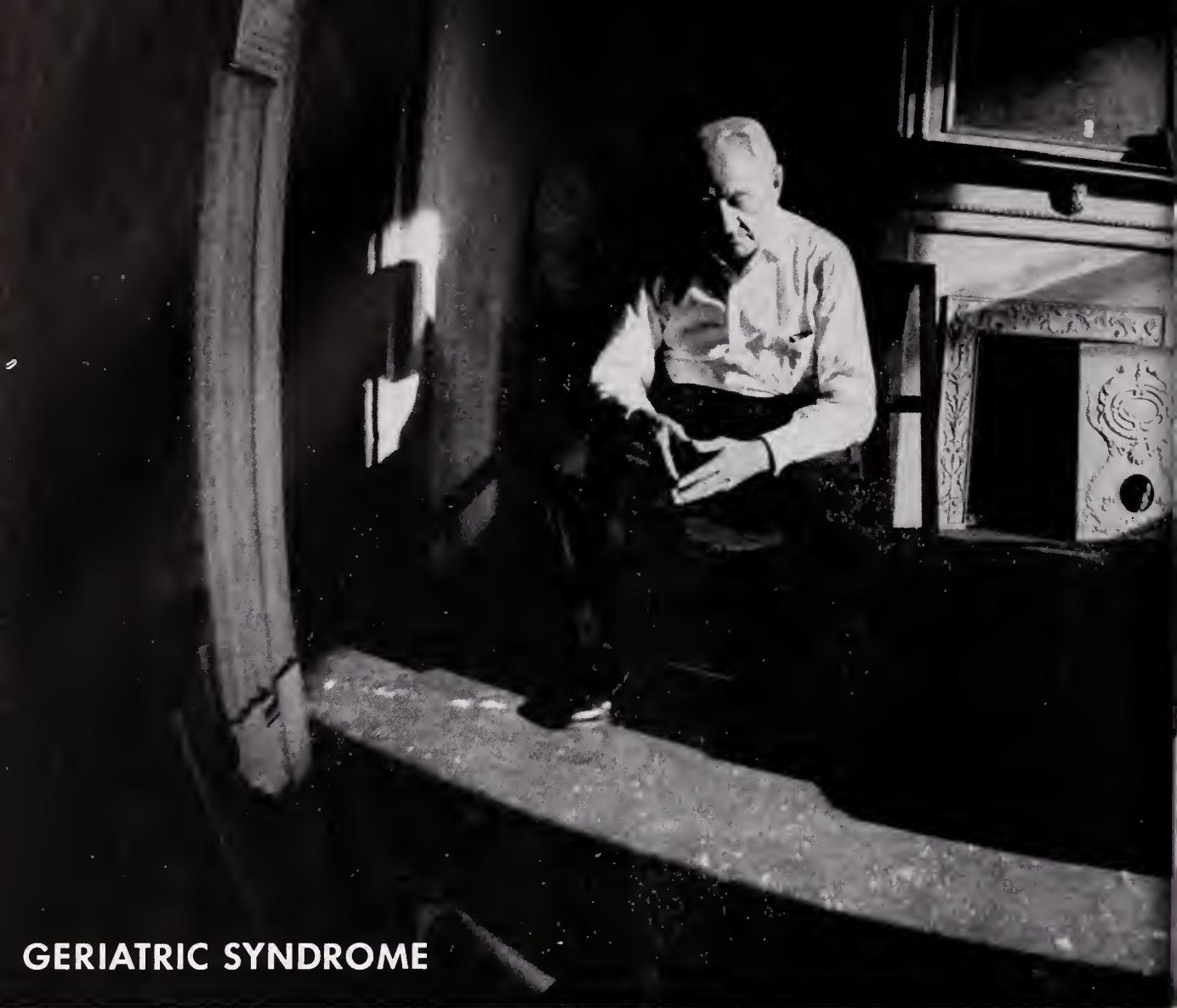
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Books Received

(Continued from page 8)

Rheumatic Fever—Diagnosis, Management and Prevention. MILTON MARKOWITZ, A.B., M.D., AND ANN GAYLER KUTTNER, B.S., Ph.D., M.D. Price, \$7.50. Pp. 242. With a special chapter on Community Health Services by Leon Gordis, A.B., M.D. Volume II in the series, Major Problems in Clinical Pediatrics; ALEXANDER J. SCHAFER, Consulting Editor. Price, \$7.50. Pp. 242, with 35 figures. Philadelphia: Saunders, 1965.

Genetics and the Epidemiology of Chronic Diseases. A Symposium, June 17–19, 1963, Ann Arbor, Michigan, sponsored by U. S. Public Health Service, University of Michigan Medical School, University of Michigan School of Public Health. Edited by JAMES V. NEEL, MARGERY W. SHAW, AND WILLIAM J. SCHULL. Price (paper), \$1.50. Pp. 395, illustrated. Washington, D.C.: U. S. Dept. of Health, Education, and Welfare, Public Health Service, Division of Chronic Diseases, 1965.

Ophthalmology: Principles and Concepts. FRANK W. NEWELL, M.Sc. (Ophth.), F.A.C.S. Price, \$12.25. Pp. 491, with 172 illustrations. St. Louis: Mosby, 1965.

Simple Splinting. The Use of Light Splints and Related Conservative Therapy in Joint Diseases. JEROME ROTSTEIN, M.D. Foreword by Jerome S. Tobis, M.D. With a chapter on The History of the Treatment of Arthritis by Laura S. Rotstein, M.A. Photography by Warren Cooper. Price, \$6.50. Pp. 126, illustrated. Philadelphia: Saunders, 1965.

The Complex World of Modern Public Health. The Third Bronfman Lecture. LUTHER L. TERRY, M.D. Pp. 36. New York: American Public Health Association, 1964.

Ciba Foundation Symposium: Cellular Biology of Myxovirus Infections. Edited by G. E. W. WOLSTENHOLME, O.B.E., M.A., M.B., F.R.C.P., AND JULIE KNIGHT, B.A. Price, \$12.00. Pp. 368, with 85 illustrations. Boston: Little, 1964.

Side effects and precautions: The transitory drowsiness which may occur with hydroxyzine usually disappears spontaneously in a few days with continued therapy, or is correctable by dosage reduction. Dryness of the mouth may be seen with higher doses. Involuntary motor activity has been reported in hospitalized patients on higher than recommended doses. Hydroxyzine HCl may potentiate CNS depressants, narcotics such as meperidine, barbiturates, and anticoagulants. In conjunctive use, dosage for these drugs should be decreased. Because drowsiness may occur, patients should be cautioned against driving a car or operating dangerous machinery. **Parenteral Solution Precautions and contraindications:** This dosage form is intended only for I.M. or I.V. administration and should not, under any circumstances, be injected subcutaneously or intradermally. When the usual precautions for I.M. injection have been followed, reports of soft tissue reactions have been rare. I.V. administration should be slow, no faster than 25 mg. per minute, and should not exceed 100 mg. in any single dose. Particular care should be used to insure injection only into intact veins; a few instances of digital gangrene occurring distal to the injection site have been attributed to inadvertent intraarterial injection or periaxillary extravasation, both of which should be avoided. **More detailed professional information available on request.**

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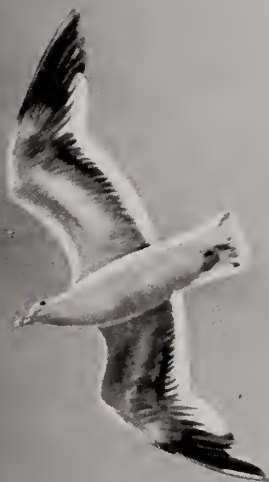
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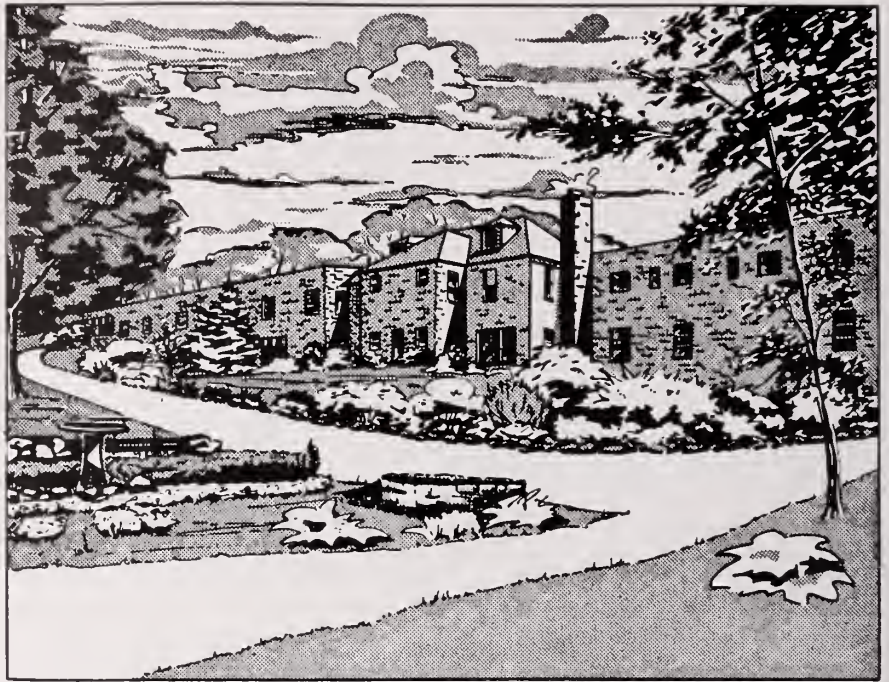
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Each 15 ml. (1 tablespoonful) contains theophylline 80 mg., 20% alcohol.
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The pediatric dose in acute asthma is 0.5 ml. per pound of body weight,
not to be repeated in less than 6 hours, and not more than 2 such dosages
to be given in 24 hours. Maintenance dosage varies from 0.3 ml. to 0.2 ml.
per pound of body weight t.i.d. until therapeutic effect is obtained.
OPTIPHYLLIN is best absorbed on an empty stomach. (Since nausea
and vomiting usually herald early signs of excessively high theophylline
blood levels, these manifestations should serve as early warning signs
to reduce or discontinue further administration of OPTIPHYLLIN.)
Side effects and precautions. As with all theophylline preparations,
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episodes of vomiting may be encountered. Other minor complaints are
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nTz is supplied in leakproof, pocket-size, spray bottles of 20 ml. and in bottles of 30 ml. with dropper.

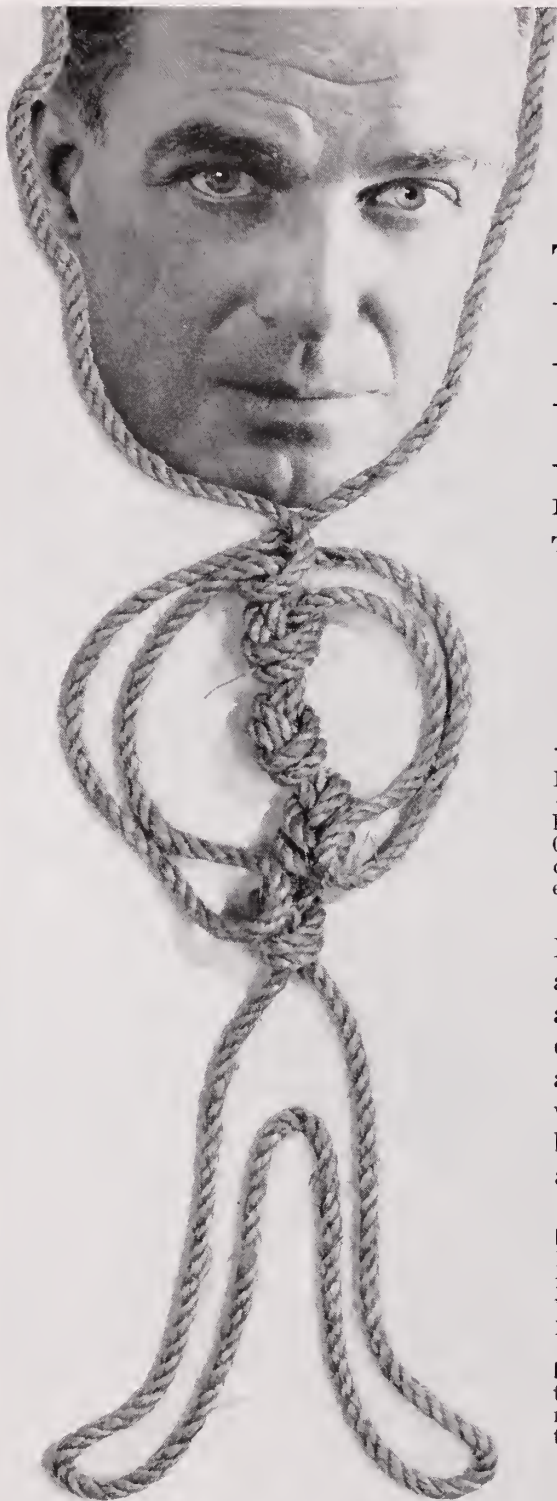
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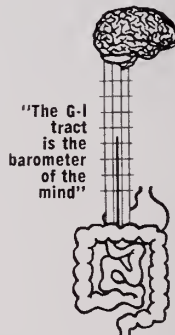
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Each Tablet or 5 cc Elixir contains 16 mg. ($\frac{1}{4}$ gr.) phenobarbital (Warning: May be habit forming), 0.0072 mg. hyoscine HBr., 0.024 mg. atropine sulfate, and 0.128 mg. hyoscyamine HBr. Belbarb No. 2, same as Belbarb, except with 32 mg. ($\frac{1}{2}$ gr.) phenobarbital. (Warning: May be habit forming.)

Belbarb calms both the agitated mind and visceral spasm by its combined sedative/antispasmodic action. Many physicians prescribe Belbarb in stress induced anxiety reactions, nervous tension states, visceral spasm, peptic ulcer, irritable bowel syndrome, urinary tract spasm, and hypertension.

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PRECAUTIONS: Do not use in patients with glaucoma or in males with prostatic hypertrophy.



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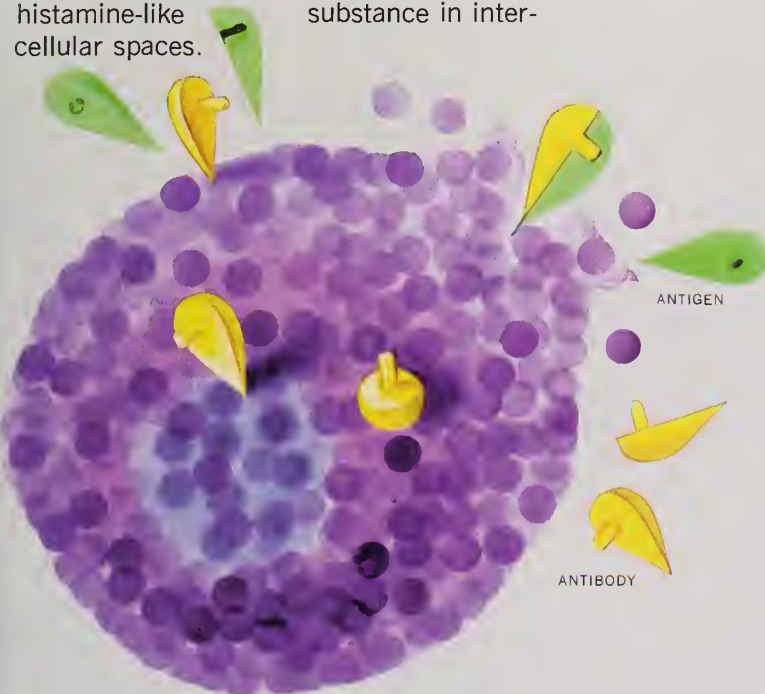
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in theory, allergy begins like this:

When antigens invade the body, antibodies, formed chiefly by plasma cells, may become attached to mast cells. If the same antigen reappears and reacts with the antibodies, the mast cell disrupts (as pictured below). Subsequently, the "exploding" mast cell deposits granules of bound histamine or histamine-like substance in inter-cellular spaces.



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work with no more sedation than placebo*

Although the mechanisms of allergy are still theoretical, the response to Dimetane (brompheniramine maleate) is ample proof that a good antihistamine can, and does, work — and (as reported in one investigation*) with no more sedation than placebo. Dimetane (brompheniramine maleate) assures your allergy patients prompt relief of symptoms while usually permitting them to lead active, alert lives. And a single Extentab provides continuous action for up to 10-12 hours.

*Schiller, I.W. and Lowell, F.C.: New England J. Med. 261:478, 1959.

BRIEF SUMMARY: *Contraindications:* Hypersensitivity to antihistamines. Not recommended for use during pregnancy. *Precautions:* Until response is determined, patient should be cautioned against engaging in mechanical operations requiring alertness. *Side Effects:* Hypersensitivity reactions, including skin rashes, urticaria, hypotension, and thrombocytopenia have been reported rarely. Occasional transitory drowsiness, lassitude, nausea, giddiness, dryness of the mouth, mydriasis, increased irritability or excitement may be encountered. *Other dosage forms available:* conventional tablets (4 mg.); Elixir (2 mg./5 cc.); Injectable (10 mg./cc. ampuls, and 100 mg./cc. in 2 cc. vials).

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basic therapy in low-back pain: **bed, board, heat**

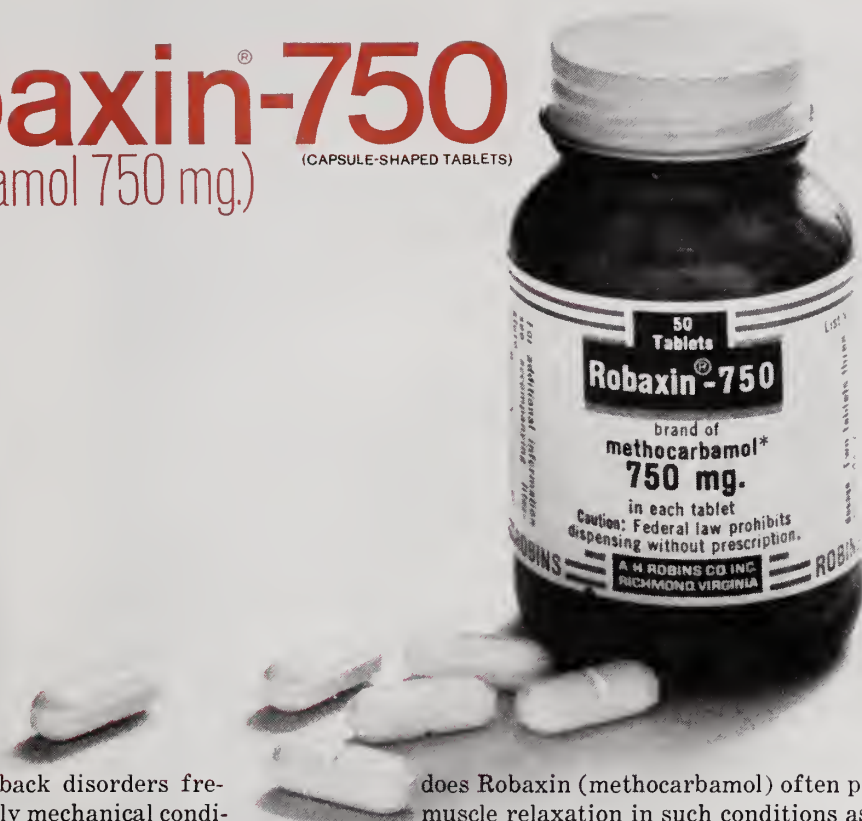
Whether low-back pain is in the chronic or acute phase, the appropriateness of bed rest for such a patient is beyond controversy. Boards placed under the mattress, for a firmer bed to further immobilize the spine, are another common recommendation. And most investigators consider heat beneficial—moist heat in particular.¹⁻⁵



and Robaxin[®]-750

(methocarbamol 750 mg.)

(CAPSULE-SHAPED TABLETS)



It has been noted that low-back disorders frequently "...are caused by truly mechanical conditions which yield to conservative treatment."¹ Basic to this conservative treatment are bed rest, a board for the bed, and applied heat. In addition, a good muscle relaxant is often helpful, as "...muscle relaxants are useful in chronic as well as acute low backaches."⁴

Robaxin (methocarbamol) has relieved spasm and pain in cases where the patient "had not responded to conservative measures prior to drug therapy."⁶ A 100-patient study showed that Robaxin provided greater relief of muscle spasm for a longer period of time without adverse reactions "than any other commonly used relaxants..."⁶

A well-tolerated⁷ skeletal muscle relaxant with "specificity of action,"⁷ methocarbamol leaves normal muscle tone unaffected. Moreover, there is little likelihood of sedation⁷—a considerable advantage for the patient who must remain active and alert on his job.

Significantly, clinicians advise using a muscle relaxant "early and in adequate dosage."⁸ In this regard, Robaxin (methocarbamol)—*particularly in the 750 mg. dosage (2 tabs. q.i.d.)*—offers optimal therapeutic benefits without a significantly increased incidence of side effects. And just as it works well as part of the basic regimen for low-back pain, so also

does Robaxin (methocarbamol) often provide muscle relaxation in such conditions as musculoskeletal injury, chronic neurological disorders, and orthopedic situations.

BRIEF SUMMARY—Robaxin (methocarbamol) Tablets: Contraindicated in hypersensitive patients. Side effects (light-headedness, dizziness, drowsiness, nausea) may occur rarely, but usually disappear on reduced dosage. Hypersensitivity reactions develop infrequently.

ALSO AVAILABLE: Robaxin[®] Tablets (methocarbamol, 500 mg.) Robaxin Injectable (methocarbamol, 1 Gm./10 cc.)

Robaxisal[®] (methocarbamol with aspirin) and Robaxisal-PH Tablets (methocarbamol with Phenaphen[®]).

REFERENCES: 1. Soto-Hall, R.: Med. Sci. 14:23, 1963. 2. McCarrol, H.R.: Paper read at the Annual Meeting of the American Medical Association, Atlantic City, June 16-20, 1963. See Medical News: J.A.M.A. 185:39 (July 13), 1963. 3. Gordon, E.J.: Med. World News 5:54, 1964. 4. Cozen, L.: GP 26:82, 1962. 5. Larson, C.B.: Postgrad. Med. 26:142, 1959. 6. Forsyth, H.F.: J.A.M.A. 167:163, 1958. 7. Weiss, M., and Weiss, S.: J. Amer. Osteopath. Ass. 62:142, 1962. 8. Rowe, M.L.: J. Occup. Med. 2:219, 1960.

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- Many problems connected with renal structure and function were still undefined or unsolved. The Renal Research Program would begin its basic research in some of these problem areas.
- From knowledge thus acquired might come clues to the development of new therapeutic agents of significant value to the physician.

For example, the Renal Research Program put fifteen years into this search before chlorothiazide became available. But because these years had first led to a greater understanding of basic problems, the desired criteria for chlorothiazide existed before the drug was developed.

Along with other research teams at Merck Sharp & Dohme, the Renal Research Program continues to add new understanding of basic problems—understanding which will lead to important new therapeutic agents.

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Butazolidin®

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Therapeutic effects

A number of investigators report improvement in about 75% of cases. Relief of pain and stiffness is the predominant response. Frequently, there is also a significant improvement in function. The beneficial effects of the drug are usually seen by the third or fourth day of treatment.

There is general agreement that milder cases of osteoarthritis are preferably treated by simple analgesics. In many patients, however, this mode of therapy fails to give sufficient relief. Because steroids are not very effective in this form of arthritis, phenylbutazone affords the drug therapy most capable of relieving the more severe cases. For best results, it is recommended that treatment with phenylbutazone be combined with physiotherapy and other appropriate supportive measures.

Dosage

The initial daily dosage in adults is 300-600 mg. in divided daily doses. In most instances, 400 mg. daily is sufficient for maximum therapeutic response. A trial period of one week is adequate to determine the effects of the drug; if there is no improvement, discontinue the drug. When improvement does occur, dosage should be promptly decreased to the minimum effective level; this should not exceed 400 mg. daily, and is often achieved with only 100-200 mg. daily.

Precautions

Before prescribing, the physician should obtain a detailed history and perform a complete physical and laboratory examination, including a blood count. The patient should be kept under close supervision and

should be warned to report immediately fever, sore throat, or mouth lesions (symptoms of blood dyscrasia); sudden weight gain (water retention); skin reactions; black or tarry stools. Regular blood counts should be made. The drug should be used with greater care in the elderly.

Warning: If coumarin-type anticoagulants are given simultaneously, the physician should watch for excessive increase in prothrombin time. Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea and sulfonamide-type agents and insulin. Patients receiving such concomitant therapy should be carefully observed for this effect.

Side effects

The most common side effects are nausea, edema and drug rash. Infrequently, agranulocytosis, generalized allergic reaction, stomatitis, salivary gland enlargement, vertigo and languor may occur. Leukemia and leukemoid reactions have been reported but cannot definitely be attributed to the drug. Thrombocytopenic purpura and aplastic anemia are also possible side effects. Confusional states, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hepatitis, jaundice, and several cases of anuria and hematuria. With long-term use, reversible thyroid hyperplasia may occur infrequently.

Contraindications

These include: edema, hypertension, or danger of cardiac decompensation; history or symptoms of peptic ulcer; renal, hepatic or cardiac damage; history of drug allergy;

history of blood dyscrasia. Because of the increased possibility of toxic reactions, the drug should not be given when the patient cannot be seen regularly, when the patient is senile, or when other potent chemotherapeutic agents are given concurrently. Large doses of Butazolidin® alkali are contraindicated in patients with glaucoma.

Note: The physician should be fully aware of dosage, precautions, side effects and contraindications as contained in the complete prescribing information.

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homatropine methylbromide	1.25 mg.

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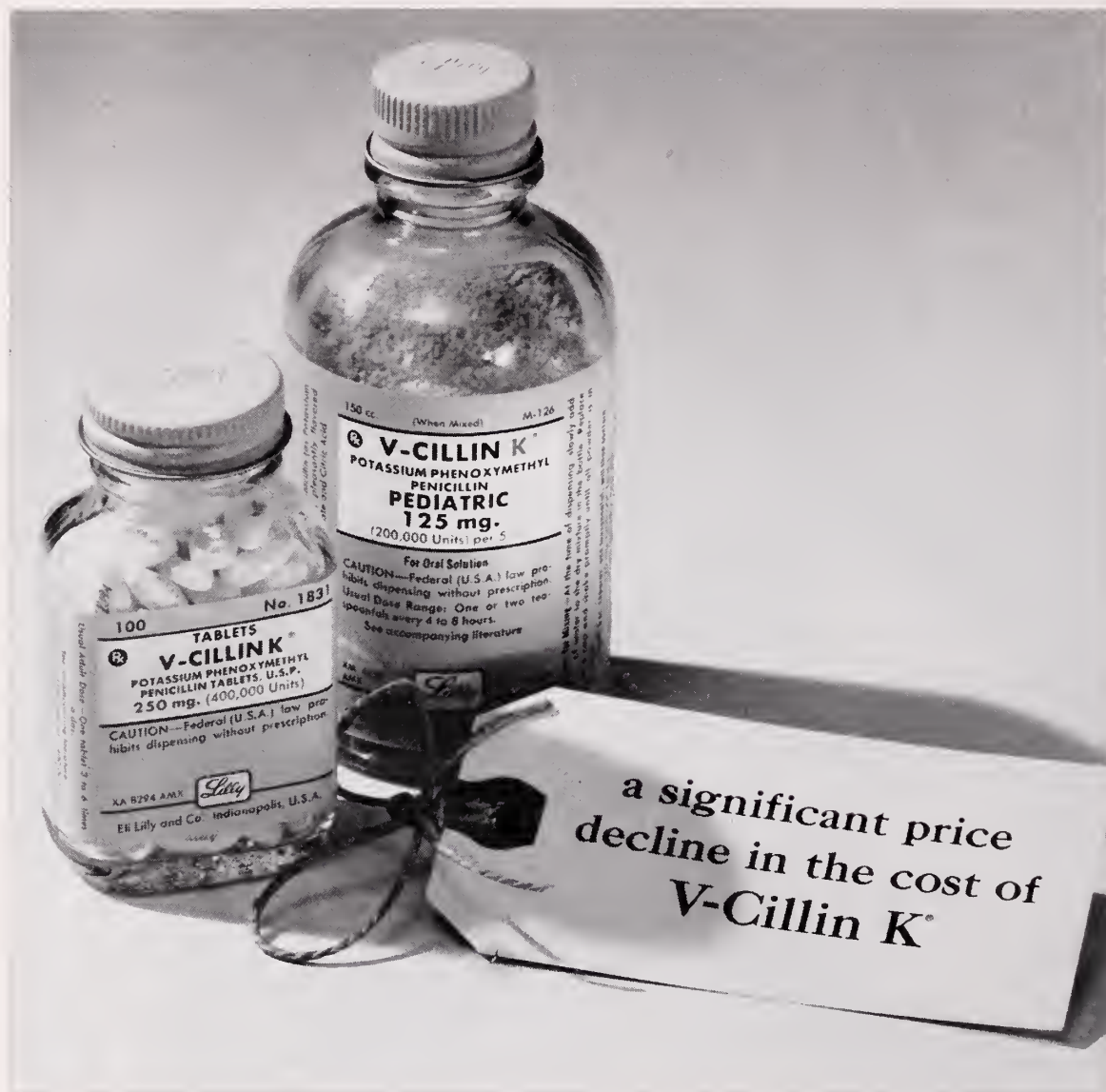
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THIS IS THE FIRST of a fourth series of special numbers of the MEDICAL ANNALS, the scientific material for which is supplied by medical institutions and scientific organizations in the Washington Metropolitan Area. For the PROVIDENCE HOSPITAL NUMBER the Editorial Board is indebted to Dr. Kenneth L. McCoy, Director of the Department of Pathology of Providence Hospital, who secured the papers which appear in this issue.

Serum Glycoproteins in the Differential Diagnosis of Idiopathic Hypoalbuminemia^{*†}

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Washington

TWO TYPES of idiopathic hypoalbuminemic syndromes have been discussed.¹ By means of metabolic balance techniques, albumin turnover studies, and studies on the permeability of the gastrointestinal mucosa it has been possible to describe 2 distinct types of idiopathic hypoalbuminemia.¹ In hypercatabolic hypoalbuminemia there occurs measurable loss of protein through the gastrointestinal tract to such an extent that the serum levels of total protein, albumin, and globulin are significantly lower than normal. Balance studies with the use of radioiodinated polyvinylpyrrolidone and albumin have shown that there occurs a leakage of proteins of certain molecular size through the gastrointestinal mucosa.¹ It is becoming increasingly clear that the term "hypercatabolic hypoalbuminemia" should be discarded, since increased catabolism as such is probably not involved.¹ The term "exudative enteropathy" has recently been suggested by Gordon² to

describe this entity. The second type is termed "ananabolic hypoalbuminemia" or "hypoanabolic hypoalbuminemia" and is characterized by decreased albumin synthesis, the absence of significant gastrointestinal loss of proteins, and normal or decreased degradation of albumin.¹ There are observations which suggest that the exudative enteropathy type might be amenable to surgical therapy if the area of leakage of protein is identified. The patients with the hypoanabolic type of hypoalbuminemia are treated with albumin infusions and diuretics when necessary. Since the differential diagnosis is important prior to any attempts at definitive therapy, it seems desirable to have simple diagnostic techniques. Undoubtedly, balance and albumin turnover studies will continue to provide important information regarding the pathogenesis of the 2 syndromes.

This paper presents data which have been collected from a small series of patients with these syndromes. The data reveal that it is possible to differentiate these conditions by the clinical features, as well as by certain relatively simple studies on the serum proteins. Patients with the ananabolic type of hypoalbuminemia

* From the Metabolism Laboratory, Providence Hospital, Washington, D. C.

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are shown to have significantly elevated levels of serum seromucoid with relatively normal seromucoid hexose concentration, whereas in the patients with the exudative enteropathy type there occurs a decreased level of seromucoid associated with a slight decrease in the seromucoid hexose concentration. The considerations presented here involve the idiopathic hypoalbuminemias; the hypoalbuminemias of more well-known basis, such as in renal disease, chronic abscesses, and similar factors in chronic disease, are excluded.

Materials and Methods

Serum samples were obtained from 2 patients in whom the diagnosis of exudative enteropathy was confirmed by metabolic balance and albumin turnover studies and from 3 patients with hypoanabolic hypoalbuminemia, in 2 of whom the diagnosis had been made at the National Cancer Institute and in 1 at Providence Hospital. The clinical features of this patient are listed in the appendix. Normal values were obtained from a continuing series.³

Serum seromucoid is the perchloric acid soluble-phosphotungstic acid precipitable glycoprotein present in serum.⁴ The perchloric acid filtrates of triplicate 0.5 ml. amounts of serum were prepared. Seromucoid was precipitated by the addition of phosphotungstic acid to this filtrate,^{4, 5} and measured turbidimetrically.⁵ The seromucoid precipitate was then washed twice with 95 per cent ethanol, and the hexose content was measured by the orcinol-sulfuric acid reaction.⁴ The acid mucopolysaccharide of serum was separated by the method of Bollet et al⁶; the turbidity obtained after the addition of protamine sulfate was measured at 400 mu after which the precipitate was determined for uronic acids by the carbazole reaction.⁶ In this manner it was possible to measure the total acid mucopolysaccharides on the basis of turbidity units and as uronic acids.³

Results

Serum seromucoid and seromucoid hexose in idiopathic hypoalbuminemia. The data are presented in table 1. The normal values were obtained from 60 subjects. It is shown that in exudative enteropathy the serum levels of seromucoid are lower than normal. The seromucoid-bound hexose is also seen to be low, and the concentration of hexose is somewhat lower than normal. The 3 subjects with hypoanabolic hypo-

TABLE 1: Serum Seromucoid Levels in Idiopathic Hypoalbuminemia

	Seromucoid (mg./100 ml.)	Seromucoid-bound Hexose	
		mg./100 ml.	as per cent
Normal	94 ± 3.0 (S.D.)	7.1 ± 0.5	7.9
Exudative enteropathy			
Case 1	68	4.0	5.9
Case 2	59	4.0	6.6
Hypoanabolic hypoalbuminemia			
Case 1 (G.M.)*	151	14.0	7.7
Case 2	228	16.0	7.2
Case 3	270	24.0	8.9

* Patient G. M. described previously.¹

albuminemia had serum seromucoid levels greater than normal, with corresponding elevations in the seromucoid-bound hexose.

Acid mucopolysaccharide in idiopathic hypoalbuminemia. The data are presented in table 2.

TABLE 2: Serum Acid Mucopolysaccharide in Idiopathic Hypoalbuminemia

	Acid Mucopolysaccharide	
	As Glucuronic Acid (mcg./100 ml.)	As Turbidity Units (OD ₄₀₀ /5 ml.)
Normal control (n = 15)	148 ± 11.0 (S.D.)	0.120 ± 0.008
Exudative enteropathy		
Case 1	306	0.225
Case 2	400	0.275
Hypoanabolic		
Case 1 (G.M.)*	338	0.338
Case 2	494	0.470

* Described previously.¹

The control values were obtained from 15 normal subjects and include the series reported previously.³ The levels of acid mucopolysaccharide are elevated in both types of hypoalbuminemia syndromes under consideration. There are slightly higher values in the hypoanabolic hypoalbuminemia type, especially when measured by the turbidimetric method.

Discussion

The data demonstrate a rather clear-cut difference in the levels of seromucoid in the 2 types

of idiopathic hypoalbuminemic syndromes studied. It is seen that in the hypoanabolic variety there occurs a level significantly higher than normal, whereas in the exudative enteropathy (hypercatabolic hypoalbuminemia) there is a significant decrease in the level of serum seromucoid. It is noteworthy that seromucoid-bound hexose is low in the latter variety since this is quite unlike the situation which occurs when seromucoid is low in hepatocellular disease. It has been shown by Greenspan⁷ and confirmed by us, that in the presence of hepatocellular damage there occurs a decrease in the serum level of seromucoid with a rise in the relative concentration of hexose. Increased seromucoid levels have been found in many infectious diseases, rheumatic fever, tuberculosis, rheumatoid arthritis, and malignant diseases. They have been classed as acute-phase reactants by some workers and employed as such in certain situations. While the major portion of these substances is released from the liver,^{7, 8} there are data suggesting that another source may well be ground substance in general.⁹ It should be quite clear, therefore, that the diagnosis of ananabolic hypoalbuminemia cannot be made on the basis of the serum seromucoid alone. However, in a given patient with idiopathic hypoalbuminemia, an elevated serum seromucoid level, from these data, would suggest the diagnosis of ananabolic hypoalbuminemia.

Decreased serum seromucoid levels have been extremely helpful in our experience in the differential diagnosis of jaundice. In agreement with the data of Greenspan we have observed that in the presence of hepatocellular jaundice there occurs a decreased seromucoid level associated with an elevated hexose concentration. In the Marfan syndrome we have found low levels of seromucoid with normal hexose concentrations (seromucoid-bound hexose?).³ Again it should be clear that the diagnosis of "hypercatabolic hypoalbuminemia" or exudative enteropathy cannot be made on the basis of the lowered seromucoid level alone. However, in a patient with hypoalbuminemia without renal loss of protein, and without evidence of hepatocellular disease, the finding of a lowered seromucoid should suggest the diagnosis of the hypercatabolic or exudative type; the possibility of this diagnosis becomes greater if the level of seromucoid-bound hexose is low.

The serum level of acid mucopolysaccharide apparently does not aid in the differentiation of these 2 types of idiopathic hypoalbuminemias.

The serum acid mucopolysaccharides are known to be elevated in several inflammatory, degenerative, and malignant diseases, and recently we have demonstrated increased levels of these substances in the Marfan syndrome.³ It becomes clear that the acid mucopolysaccharide in the serum fails to have a major differential diagnostic value in idiopathic hypoalbuminemia.

From the data obtained it is possible to establish the clinical and laboratory features of the idiopathic hypoalbuminemic syndromes. In table 3 is presented a summary of the findings in these syndromes. It is seen that the diagnosis

TABLE 3: Clinical and Laboratory Features of Idiopathic Hypoalbuminemias

	Hypoanabolic Hypoalbuminemia	Exudative Enteropathy
Age of onset	Second decade	Wider range
Extent of edema	Usually below belt line	Generalized or dependent ?
Previous history	Often respiratory infections	
Gastrointestinal symptoms	None	Diarrhea, bulky stools
Type of edema	Pitting and brawny	Pitting
Sedimentation rate	Elevated	Normal
Total serum protein	Decreased	Decreased
Albumin	Decreased	Decreased
Globulin, total	Increased	Normal or decreased
Gamma globulin	Increased or normal	Decreased
Albumin turnover	Normal or decreased	Increased
Serum cholesterol	Increased	Normal or decreased
Serum seromucoid	Increased	Decreased

of the exudative enteropathy syndrome is suggested by the presence of gastrointestinal findings, decreased γ globulin, increased albumin disappearance, lowered cholesterol, and lowered seromucoid. The absence of gastrointestinal disease, the presence of increased globulin, increased γ globulin, decreased albumin levels associated with a normal or slightly decreased turnover, increased serum cholesterol, and increased seromucoid are suggestive of the ananabolic hypoalbuminemia. Since the method for the determination of the glycoprotein seromucoid is quite simple, this information should be useful in the workup of patients with idiopathic hypoalbuminemia.

Summary

Some of the clinical and laboratory features of the idiopathic hypoalbuminemic syndromes have been presented. The exudative enteropathy type (also called hypercatabolic hypoalbuminemia) is characterized by a history of gastrointestinal symptoms coupled with edema secondary to hypoproteinemia. The mechanism appears to

involve the loss of protein through the gastrointestinal mucosa, and as a result of this leakage the disappearance of albumin is rapid. The hypoanabolic type of hypoalbuminemia is not associated with gastrointestinal disease, and there is no increased protein loss. The serum seromucoid level is low in the exudative enteropathy type and elevated in the ananabolic variety. Serum cholesterol is normal or decreased in the exudative variety and is elevated in the ananabolic hypoalbuminemia. The serum acid mucopolysaccharide apparently is not of differential diagnostic value in the types of hypoalbuminemic syndromes discussed.

APPENDIX: Case 3 (Hypoanabolic hypoalbuminemia). C. P., a 38-year-old white man, was seen in consultation because of a long history of edema in both legs and occasional tightness in the abdomen of several years' duration. He had been studied repeatedly in the past to rule out renal disease, hepatic disease, endocrine disease, and primary electrolyte disturbances, and these studies have been consistently nonrevealing, except for consistently low serum proteins and albumin, without evidence of hepatocellular disease.

The history revealed chronic bronchitis with occasional episodes of "asthmatic bronchitis." There was no history of previous congestive heart failure, but the patient stated that he had had occasional elevations in blood pressure, not requiring any definitive therapy. A hemorrhoidectomy had been performed recently and he tolerated the procedure satisfactorily. The edema in the legs probably dated back 10 years, but the patient was unable to describe any specific precipitating factor. He stated that although there had been no seasonal occurrence of the swelling, there had been at least on 2 occasions temporary disappearance of the edema. The last such remission was 3 years prior to this examination. The family history was essentially nonrevealing, and the patient did not recall any similar disease in his family tree. The patient specifically denied any history of gastrointestinal disease or diarrhea, and had never had any jaundice or evidence of liver disease.

The weight was 217 lb. The patient had a slightly plethoric appearance. The blood pressure was 130/90, the pulse rate 76, and the respiratory rate 18/min. Significant physical findings were occasional coarse rhonchi in both bases but no evidence of consolidation, normal heart size and rhythm with no murmurs, slight abdominal distention but no fluid wave, no overt visceromegaly, pitting and brawny edema bilaterally from the lower third of the thigh to the feet, without any evident venous distention or peripheral vascular insufficiency.

The hemoglobin was 16 Gm./100 ml., with a hematocrit of 48 per cent; leukocytes numbered 5,700 cu. mm., with 65 per cent segmented neutrophils and 35 per cent lymphocytes. A urinalysis was normal. The

serum cholesterol was 370 mg./100 ml., total protein 4.7 Gm./100 ml., albumin 1.8 Gm./100 ml., alpha globulin, 1.1 Gm., gamma globulin, 0.7 Gm., and beta gamma, 1.1 Gm./100 ml. Repeat protein studies on 2 occasions were quite similar to these presented. Brom-sulfalein retention was 8 per cent; cephalin flocculation, negative; prothrombin activity, 100 per cent, urea nitrogen 15 mg./100 ml.; serum sodium, potassium and chloride were normal. A chest X-ray film revealed scattered fibrotic changes in both lower lung fields and hilar areas with no evidence of localized pleural disease. Complete gastrointestinal X-ray studies were normal; intravenous pyelogram was normal; and electrocardiogram revealed a semivertical axis, with normal QRS-T angle, within normal limits. Proctosigmoidoscopy showed no pathology.

In view of the absence of renal loss of protein or of other overt cause of edema and hypoproteinemia, an estimate of the biologic half-life of albumin was made. The procedure was relatively crude, but it was considered adequate to rule out a rapid albumin disappearance. Since the albumin showed fairly constant levels on repeated occasions, fairly stable kinetics were assumed. Accordingly the patient was given 100 Gm. of human serum albumin by slow intravenous drip in 2 doses of 50 Gm. each 1 day apart. The serum proteins were determined daily for the next 5 days and thereafter for every 5 or 6 days for 50 days, and occasionally thereafter. The increment above the baseline level was regarded as infused albumin, and the fall-off from this increment was determined and an estimate made of the biologic half-life of the infused albumin. The studies revealed a logarithmic decay of the infused albumin, and the biologic half-life was estimated as 17 days. On several occasions later the patient was observed to maintain the previously determined albumin levels. In view of the apparently normal biologic half-life of the albumin and the absence of any evidence to suggest gastrointestinal loss of albumin this patient was included in the group of hypoanabolic hypoalbuminemia.

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(Continued on page 454)

Neonatal Hyperbilirubinemia

A Review of Six Years' Experience 1959-1964

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DURING THE PAST 6 YEARS we have conducted a continuous evaluation of our experience in the diagnosis and management of neonatal hyperbilirubinemia. This project is a joint undertaking of the departments of Pathology and Pediatrics at Providence Hospital, and a preliminary report has been given elsewhere.¹

In our series this is not the case. The Rh system is responsible for 61 per cent of all cases of erythroblastosis. The ABO system is responsible for 36 per cent of all cases. There are several factors which may explain this discrepancy. The hemolytic process is relatively mild in most cases of ABO incompatibility. Anemia is rarely seen,

TABLE 1: Neonatal Jaundice—Providence Hospital Series

	1959	1960	1961	1962	1963	1964	Total	Per cent
Total no. of deliveries	4,143	4,216	4,520	4,582	4,653	4,583	26,697	
Congenital hemolytic disease	24	44	41	56	65	39	269	61.4
Hepatic conjugation defect	2	23	7	24	57	53	166	37.9
Miscellaneous	1	2	0	0	0	0	3	0.7
TOTAL	27	69	48	80	122	92	438	100

Survey

All the patients selected for this series are infants who developed clinical jaundice during the first week of life and had at least 1 serum bilirubin determination of 13 mg. per cent or higher. The total number of patients in this category during the 6-year period (1959-1964) is 438, and the total number of deliveries during the same period of time is 26,697.

Table 1 illustrates the total series. The majority of the patients are grouped in the congenital hemolytic disease category, 62 per cent of the total. The breakdown of this group based on the type of maternal antibody involved is given in table 2.

According to present opinion² erythroblastosis caused by blood factors A or B is said to be common, comprising approximately 2/3 of all cases.

TABLE 2: Neonatal Jaundice—Providence Hospital Series: Etiologic Factors

Year	1959	1960	1961	1962	1963	1964	Total	Per cent
Erythroblastosis	24	44	41	56	65	39	269	61.6
D (Rh ^o)	21	19	26	34	42	25	167	38
A	1	15	10	15	12	12	65	24.3
B	0	9	5	7	11	1	33	12.1
c (hr')	2	0	0	0	0	0	2	0.7
C (rh')	0	1	0	0	0	0	1	0.3
V	0	0	0	(1)*	0	0	(1)	0.3
E (Rh*)	0	0	0	0	0	1	1	0.3
Conjugation defect	2	23	7	24	57	53	166	37.7
Giant-cell hepatitis	0	1	0	0	0	0	1	
Obstructive jaundice	0	1	0	0	0	0	1	
Congenital toxoplasmosis	1	0	0	0	0	0	1	0.7
TOTAL CASES	27	69	48	80	122	92	438	100

* Case of double factor incompatibility.

and in the majority of cases hemolysis results in jaundice which coincides in its time of development and peak of bilirubin value with so-called physiologic jaundice of the newborn. Another difficulty to establish the diagnosis of ABO erythroblastosis in the neonate is the lack of dependable diagnostic prenatal or postnatal serologic tests. The fact that the mother is type O does not necessarily imply that an A or B incompatibility is the cause of the jaundice. It is conceivable that if a specific serologic test capable of detecting prenatal or postnatal sensitization is developed, the number of cases ascribed to A or B incompatibility may be further reduced.

The category listed as temporary bilirubin conjugation defect comprises the group responsible for 37.9 per cent of cases in this study. The infants placed in this category fulfilled the following criteria:

- 1. Maternal and infant compatibility in the ABO and Rh^o systems.
- 2. Negative direct Coombs' test in the infant's blood.
- 3. No previous maternal history of iso-immunization.
- 4. Neonatal jaundice reaching peak levels after 36 hours of life.
- 5. Hemoglobin and hematocrit readings usually higher than normal.
- 6. Reticulocyte counts normal for the infant's age.
- 7. History of breast-feeding or poor-formula intake.

This group represents cases in which jaundice was produced by immaturity of the hepatic glucuronyl transferase system responsible for the hepatic conjugation of bilirubin. This enzyme is relatively deficient in the newborn.³ Its low activity is the fundamental basis for the accumulation of unconjugated bilirubin in the neonatal period, since conjugation of bilirubin is necessary before bilirubin is excreted by the liver.

Experience with this group of infants taught us that there is extreme variability in the rate at which the functions involved in bilirubin metabolism develop and that these functions can be further depressed by the superimposition of additional processes. The result may be extremely high levels of serum bilirubin in a sizable group of infants with no definite hemolytic process.

The role played by prematurity in this particular group is presented in table 3. There were 26,697 deliveries during the study period. A total

of 1,849 prematures were born, and of these 165 were considered previable.

The incidence of hyperbilirubinemia due to delayed hepatic conjugation of bilirubin in the premature group was 2.5 per cent. The same incidence in the full-term group was 0.47 per cent. The greater incidence of hyperbilirubinemia in prematures without associated hemolytic anemia has been a universal finding. The fact that this condition was found in 47 full-term infants in 10,000 deliveries indicates that birth weight is not always an indicator of maturity of the hepatic glucuronyl transferase activity.

**TABLE 3: Nonhemolytic Neonatal Icterus
—166 Cases
(Temporary Bilirubin Conjugation Defect)
Relation to Prematurity and Treatment**

	Total Cases	Cases Not Requiring Exchange Transfusion	Cases Exchanged
Prematures	48 (30%)	37	11
Full-term	118 (70%)	99	19

Icterus is also more severe in the premature group. There were 48 prematures in this group, and of these 11, or 23 per cent, required exchange transfusions. In the same nonhemolytic group there were 118 full-term infants, and of these 19, or 16 per cent, developed severe jaundice and required exchange transfusions.

Exchange Transfusions

Table 4 illustrates the exchange transfusion experience. The cases are tabulated according

TABLE 4: Number of Exchange Transfusions

No. of Transfusions	Rh ^o	ABO	BCD
1	66	30	26
2	41	24	5
3	19	2	0
4	5	0	0
5	1	0	0
6	1	0	0

to the etiologic factors responsible for the performance of the procedure. To demonstrate the severity of the icterus, the number of infants requiring 1 or more exchanges are shown. Our indications for exchange transfusions are the same as given by Allen and Diamond.²

Two hundred and twenty infants required a total of 356 exchange transfusions. As expected,

the hemolytic group presents the most severe hyperbilirubinemia. In this group 50 per cent of the Rh-sensitized babies required more than 1 exchange, while in the ABO-sensitized group 46 per cent required reëxchange. The severity of the icterus in the Rh-sensitized group is further attested by the number of affected babies requiring more than 2 exchange transfusions. In this series 31 babies, or 23 per cent, fell in this category. In the ABO-sensitized group only 2, or 3 per cent, required more than 2 exchanges. Only 16 per cent of the nonhemolytic group required more than 1 exchange transfusion.

Mortality

Table 5 illustrates the total mortality in this series. The infants belonging to the Rh group,

TABLE 5: Total Mortality (17 Cases)—Autopsy Data

Type of Case	No. Cases	Associated Data
Erythroblastosis hydrops fetalis (Rh)	10	7 with no treatment died within minutes of birth 3 died during transfusion
Rh with congenital heart disease	1	Died soon after transfusion
Rh with severe disease—giant-cell transformation of liver	1	Died first day after second transfusion
Rh sudden death—cardiac arrest	1	Died during first transfusion
Rh sudden death—hyperplasia islets of pancreas with eosinophilic infiltrates	1	Died during first transfusion (maternal prediabetic state)
Rh severe icterus—anasarca	1	Died after second transfusion
Non-erythroblastosis		
Meningoencephalocele— aspiration pneumonia	1	No transfusion
Prematurity—hyaline membrane disease	1	No transfusion

hydrops fetalis, are considered unsalvageable. Three of these had exchange transfusions but died during the procedure. The other 5 fatalities in the hemolytic group were all severely sensitized. One died of congestive heart failure after the first exchange, and the autopsy revealed severe congenital heart disease, which was considered the cause of death. The second infant died after the second exchange, and at autopsy the histologic picture of giant-cell hepatitis coexisted with that of erythroblastosis. The next infant had a sudden cardiac arrest during exchange transfusion, and the autopsy revealed only the features of erythroblastosis. The next infant also died suddenly during the procedure, but autopsy presented a picture of hyperplasia of the islets of Langerhans associated with eosinophilic granulocytic interstitial infiltrates in the pancreas. This histologic picture has been described with infants born of prediabetic or

diabetic mothers. These infants, whether or not affected with erythroblastosis, are prone to die suddenly. The last infant in the Rh fatalities was a severely involved baby who died after the second exchange transfusion and at autopsy presented findings consistent with congestive failure and severe erythroblastosis.

In the nonerythroblastotic group 2 deaths were noted. Neither infant had an exchange transfusion, and the jaundice, although severe enough to include them in the series, was apparently an incidental finding associated with a more severe primary disease.

Table 6 gives the total mortality in the series and the total mortality associated with exchange transfusions. Since 3 of these babies were hy-

TABLE 6: Total Mortality in Series and Associated with Exchange Transfusions

Total Mortality	
Total no. of cases.....	438
Total no. of deaths.....	17
Per cent mortality.....	3.9
Total Mortality Associated with Exchange Transfusions	
Total no. of exchanges.....	356
No. of deaths in all infants exchanged...	5
Per cent mortality.....	1.4

dropic at birth and considered unsalvageable, the corrected mortality for exchange transfusions is 1.4 per cent. There were no cases of kernicterus in this study.

Summary

The incidence of neonatal hyperbilirubinemia during a 6-year period has been reviewed. The number of infants in the hemolytic and non-hemolytic groups was determined and the etiologic factors discussed. The number of exchange transfusions has been tabulated and the severity of the hyperbilirubinemia in each group discussed. The mortality with associated clinical and necropsy data has been presented.

There were no cases of kernicterus in this series.

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Hospital Salmonellosis

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THE SOURCE OF THE ORGANISM in human salmonellosis can usually be traced to contaminated food or water. The present report suggests that widespread distribution of some *Salmonella* types may occur as subclinical infection until activated by the lowered resistance of the host following surgical trauma.

Until recently a small, fairly constant number of *Salmonella* isolations might be expected each year in a community hospital laboratory in this area. It is well known that the highest incidence of *Salmonella* isolations occurs among individuals residing in the Southeast section of Metropolitan Washington. The general rise in incidence of salmonellosis across the country between 1946 and 1955 as reported by Edwards¹ has been paralleled by frequent reports of institutional outbreaks often involving hospitals.²⁻⁵ In 1950 Felson et al⁶ reported 5 cases of "inapparent" *Salmonella* infections in hospital personnel and patients. Close et al⁷ in 1960 analyzed 10 cases of *Salmonella* infection on a general surgical service and concluded that there was no single source of contamination and that this epidemic could not be traced to contaminated food or drink. "Hand transmission" of infection was postulated.

The observations in the present work coincide in time with a widespread interstate outbreak of *Salmonella derby* infections occurring in North-eastern United States. A preliminary report of this epidemic which originated in New York and Pennsylvania was published by Sanders et al in 1963.⁴

Materials and Methods

Cultural procedures for the specimens from sources primarily involved in the present work (feces, blood and urine) do not differ significantly from accepted standard methods. Healthy personnel, food products, and fomites surveyed were cultured according to the same techniques

and by the same laboratory personnel as were used in studies on patients.

Stool cultures. Fecal specimens were inoculated heavily, by means of a cotton swab, onto plates of eosin-methylene blue (EMB) agar and *Salmonella-Shigella* agar.

Blood cultures. A 10 ml. blood specimen was aseptically obtained and 5 ml. inoculated into a Castaneda bottle containing trypticase soy broth overlaid on trypticase soy agar. The remaining 5 ml. was cultured in thioglycollate broth.

Urine cultures. One-tenth ml. inocula of diluted (1:100) midstream specimens or undiluted catheterized specimens of urine were used to inoculate the surface of EMB agar plates, sheep blood agar plates, and thioglycollate broth respectively. All plates were streaked with a bacteriologic needle, and all cultures were incubated at 37°C.

Biochemical and serologic identification. Colonies of gram-negative rods failing to ferment lactose were subcultured and tested in the usual biochemical tests. Saline suspensions of all cultures presumptively identified as salmonellae were confirmed by slide agglutination in *Salmonella* polyvalent antiserum* and in a battery of *Salmonella* antisera including Groups A, B, C₁, C₂, D, E and Vi and polyvalent Bethesda-Ballerup serums. When further confirmation was desired cultures were sent to the D. C. Health Department Laboratory and the Communicable Disease Center, Atlanta, Georgia.

Observations

In the period July 1963 to June 1964 salmonellae of serologic group B were isolated from 32 patients. In the 12-month period prior to July 1963, 5 group B *Salmonella* were isolated, and in the 12-month period since June 1964 10 group B *Salmonella* have been isolated.

The first isolation of group B *Salmonella* in

* Lederle Laboratories, Pearl River, New York.

this laboratory during the 12-month period under discussion occurred in a stool culture obtained on July 4, 1963 from a 73-year-old woman admitted to the hospital on June 30 with a diagnosis of colitis and rectal bleeding. The patient occupied a room on the seventh floor of the hospital and was not operated on during her hospital stay. She resided in the Northwest section of the city and was eventually discharged, improved, to her home after treatment with chloramphenicol.

The second isolation of Salmonella group B was obtained from a stool culture of a 78-year-old woman who was admitted to the fourth floor of the hospital on July 5, 1963, was operated on

Since there was no evidence of contact with a common carrier for these cases and since it was known that Salmonella infections were increasing as a serious interstate problem at this time, the head of the diet department was alerted to the possibility of eggs and egg products as a possible source of infection.

Cultures of egg slurries were performed 3 times a week for 2 weeks with randomly selected eggs from the diet kitchen. No salmonellae were isolated. Cracked eggs were routinely discarded, and it was decided to eliminate the use of raw or undercooked eggs as a matter of hospital policy.

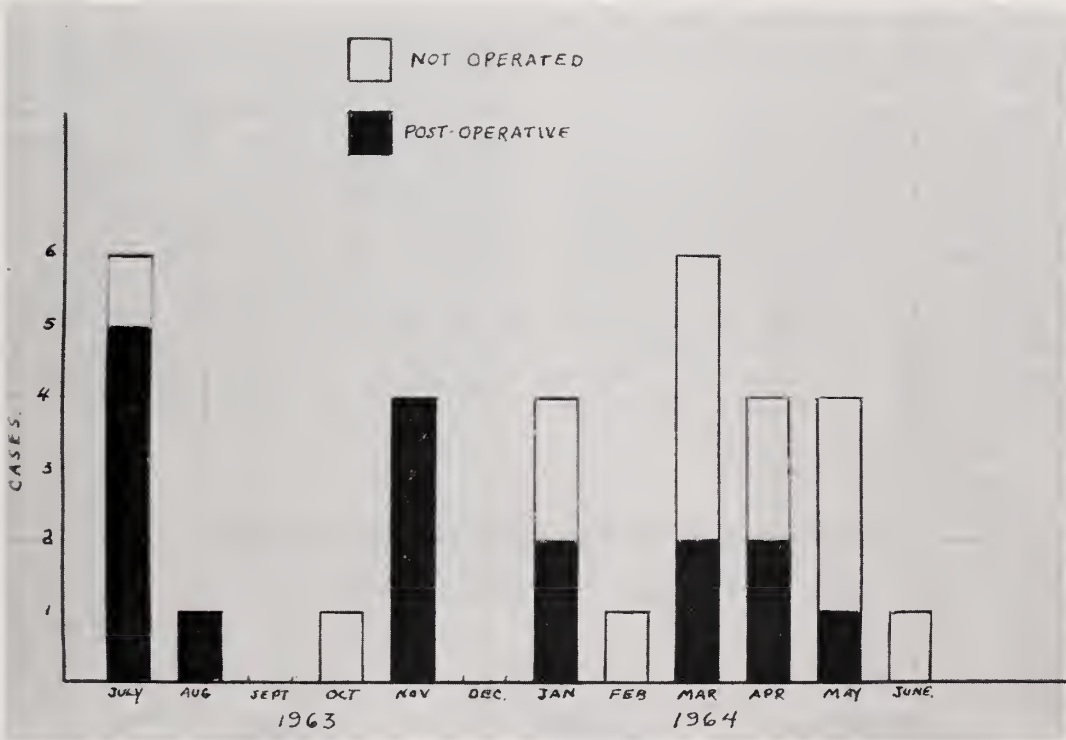


Fig. 1. Distribution of Salmonella isolations by month and relationship to operative procedure.

July 6 for arthroplasty of the hip, was febrile immediately postoperatively, developed diarrhea within 48 hours postoperatively, and had stool cultures on July 11. This patient resided in the Northeast section of the city and after treatment with chloramphenicol and Lactinex® was discharged.

As far as could be ascertained there were no professional personnel common to both cases. The most recent isolations of group B Salmonella previous to these 2 cases were obtained on June 18, 1963 from a specimen sent to the laboratory from a nonhospitalized patient and on June 17 from a child admitted to the pediatric wing.

Stool cultures of food handlers and floor personnel failed to detect a Salmonella carrier.

Routine stool cultures on hospital personnel conducted under the supervision and policy of the Employees Health Service were consistently negative for Salmonella and Shigella isolations before, during, and since the 1963 peak of Salmonella isolations from patients.

As additional cases of salmonellosis sporadically appeared it became evident (figure 1) that group B Salmonella infection frequently followed a surgical procedure on the patient. Figure 1 graphically illustrates the distribution of Salmonella isolation by month and indicates the rela-

tionship to operative procedures. Seventeen of the 32 cases followed some surgical manipulation. No direct correlation could be made between the extensiveness of the surgical trauma and the severity of the *Salmonella* infection. Furthermore, there was no common surgeon, anesthetist, or nursing personnel associated with each post-operative salmonellosis. Repeated cultures of instrument fomites included endotracheal tubes, metal fittings, and plastic tubes of anesthesia apparatus, rubber face masks, and operating room sinks and tables. All such cultures failed to recover *Salmonella*. No correlation could be made between the patients and their place of residence in the community, their location in the hospital, or their age, sex or race. Half of the 32 case histories showed some previous abdominal symptoms (such as nausea or diarrhea) or had a previous history of abdominal surgery.

The consistent failure to recover *Salmonella* from food, fomites, and personnel, together with the erratic distribution of cases during the period under study strongly suggests that no primary source of contamination existed.

The widespread distribution of *Salmonella derby* (group B) that occurred between March 1 and August 12, 1963 resulted in 1,150 isolations from 42 states and the District of Columbia.⁴

Sanders et al⁴ reported that over 50 per cent of the total isolations in the Philadelphia area were from individuals without symptoms.

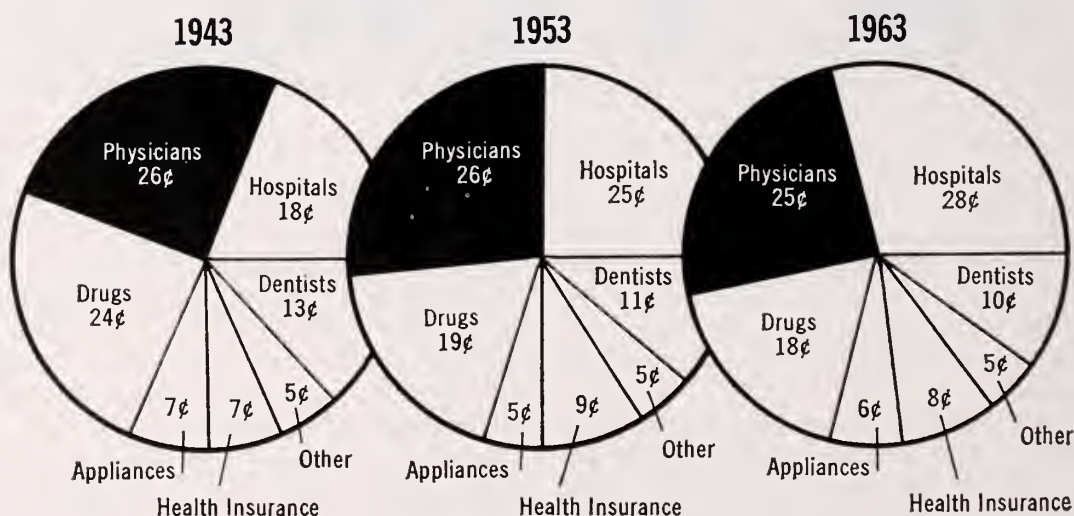
It seems plausible to conclude that many *Salmonella* group B subclinical infections existed during 1963–64 in this area. Depressed resistance, particularly in the form of surgical trauma, results in overt infection.

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Abdominal Aortic Aneurysms

Problems in Diagnosis and Management in the Community Hospital

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AFTER THE FIRST SUCCESSFUL RESECTION and replacement of an aortic aneurysm by Dubost¹ in 1951 surgery was able to advance a definitive form of therapy for a lesion hitherto lethal for man as far back as can be recorded in medical history. During the past 15 years the medical centers of the world have devoted efforts toward refining techniques, developing suitable arterial substitutes, and training competent surgeons. Prior to 1960 only scattered reports of surgery for aortic aneurysms were coming from outside the major medical centers. Today, with the upgrading of diagnostic acumen, preoperative and postoperative care, and availability of trained personnel, the community hospital is assuming a major role in the surgical treatment of vascular disease. It is the purpose of this paper to evaluate the management of abdominal aortic aneurysms in 3 community hospitals (Providence, Suburban and Holy Cross) in the Washington Metropolitan Area for the past 3 years. The cases are illustrative of the problems encountered with aortic aneurysms. It is hoped that the analysis of our cases will give practitioners a better understanding of the conditions involved in the diagnosis and management of aortic aneurysms.

All of the cases presented are arteriosclerotic in origin. The less common etiologies, including syphilis, trauma and septic mycotic aneurysm, were not found in this series. Aortic aneurysms in the natural development of the disease may remain static and asymptomatic throughout the life of the patient until he dies of other causes, may expand and rupture and result in death, or may thrombose, causing severe distal ischemia.

Intact Abdominal Aneurysms

Between 1961 and 1964 a total of 54 cases of abdominal aortic aneurysms were admitted to the 3 hospitals. There were 33 cases of intact aneurysms. The average age of these patients was 67 years. There were 18 males and 14 females. Thirteen of the patients underwent elective surgical correction.

Signs and symptoms. Analysis of the presenting findings and diagnostic studies reveals a rather characteristic picture which enables the clinician to make the diagnosis in the majority of the cases. Table 1 summarizes the findings in the 33 cases. Fourteen patients complained of

TABLE 1: Signs and Symptoms of 33 Patients with Intact Abdominal Aortic Aneurysms

Back pain.....	14
Abdominal pain.....	20
Ischemic leg pain.....	8
Thigh pain.....	6
Asymptomatic.....	5
Palpable mass.....	12
Misdiagnosed on admission.....	6
Diagnosed at surgery.....	3
X-ray positive.....	27
X-ray negative.....	2

back pain and 16 of abdominal pain. Many had combined symptoms. The location of the abdominal pain varied among the 4 quadrants of the abdomen, the most common being in the epigastrium and left side. Eight patients presented findings of ischemic pain in the extremities. Five patients were asymptomatic. A palpable mass was recorded on the charts of 12 patients. Seven patients were misdiagnosed on the admitting sheet. Incorrect diagnoses included

intestinal obstruction, pain secondary to inguinal hernia, Leriche syndrome, fibroid uterus, ascites and hypertension, and abdominal tumor. Several of the patients were admitted for other conditions and during the course of the hospitalization a previously unsuspected aneurysm was found. Eighteen patients were known to have had an aneurysm for 5 years to 1 week, with an average of 10 months prior to admission.

In the use of diagnostic procedures the flat plate and lateral X-ray film of the abdomen is by far the most accurate means of substantiating the presence of abdominal aortic aneurysms. Twenty-nine patients had X-ray examinations performed; 27 had positive findings, and in only 2 patients did the aneurysm fail to be visualized on X-ray films. In none of these cases was aortography carried out. In the present management of aortic aneurysms aortography is resorted to only in rare instances. Three patients had the diagnosis made while undergoing surgery including inguinal herniorrhaphy, the Leriche syndrome, and hysterectomy for fibroid uterus.

Analysis of untreated cases. Twenty patients were admitted and discharged from the hospital without undergoing surgery. In a review of these cases only 3 patients from the findings on the chart were considered to be acceptable candidates. One of these patients refused surgery. The other 2 patients have been lost to follow-up. Table 2 illustrates the reasons for nontreatment.

TABLE 2: Contraindications for Elective Surgery

Gastrointestinal hemorrhage.....	2
Advanced arteriosclerosis, over 80.....	4
Advanced arteriosclerosis, under 80.....	6
Diabetic coronary heart disease, severe.....	2
Fractured hip.....	1
Refused surgery.....	1
Transferred.....	1
Apparent good risk, lost to follow-up.....	2

Two patients in this category had far-advanced diabetic arteriosclerotic disease. Three patients had unrelated acute surgical conditions which demanded treatment. By and large the most common reason for conservative care was far-advanced arteriosclerotic cardiovascular disease.

Analysis of surgical candidates with intact aneurysms. Thirteen patients underwent elective resection of the aneurysm. There were no deaths in the early postoperative period. One patient died 18 months later in the postoperative period following transurethral resection. This patient died suddenly, and autopsy was refused. The

clinical impression at that time was acute myocardial infarction. The postoperative survival in this group ranges from 6 to 36 months.

Almost all of these patients had some other medical problem of significance. The majority showed signs of associated arteriosclerotic disease elsewhere in the body. This ranged from a history of myocardial infarction to 1 patient who had an acute myocardial infarction some 14 days prior to surgery. The latter while recovering from myocardial infarction began to show severe symptoms of impending rupture of his aneurysm. This patient was treated expectantly for 5 days but as symptoms progressed we elected to carry out resection. To the amazement of all individuals concerned this patient made an uneventful recovery and at the present time, 6 months later, is living and well. Other conditions included emphysema, chronic alcoholism, diabetes, and chronic deep-vein thrombophlebitis with a long history of multiple pulmonary embolisms, and 1 patient had associated aneurysms of the femoral and popliteal arteries. Three patients had findings of distal segmental arteriosclerotic obstruction in the lower extremities. In all cases the graft replacement was either of dacron or teflon fiber.

TABLE 3: Complications of Elective Surgery

Early complications:	
Distal embolism.....	2
Evisceration.....	1
Wound dehiscence.....	1
Myocardial infarction.....	1
Late complications:	
Intestinal obstruction.....	2
Partial intestinal obstruction.....	1

Complications of surgery in this series (table 3). Early complications included 1 wound evisceration and 1 wound dehiscence, 2 cases of distal arterial embolism, and 1 case of postoperative myocardial infarction. The myocardial infarction occurred in the oldest patient in this group, who was 82 years of age. Late complications included 2 cases of intestinal obstruction necessitating surgery and 1 case of partial intestinal obstruction which was treated conservatively.

Ruptured Abdominal Aortic Aneurysms

In the ruptured group a total of 21 patients were seen and the diagnosis confirmed either by surgery or autopsy in the past 3 years. There

were 17 males and 14 females. The average age was 71 years. The clinical picture of ruptured aneurysms is one of an acute catastrophe once massive hemorrhage has occurred. Death within a short period of time is the usual course. The mortality from the 21 cases attests to this. Of the 21, 20 patients expired within the period of hospitalization, including 6 patients undergoing surgery. One patient survived surgical correction and is alive and well today, 6 months later.

Signs and symptoms. Twelve of the 21 patients were in profound shock at the time of admission. They had been symptomatic for an average of 45 hours. Nine patients were normotensive with a normal hematocrit on admission. They were symptomatic for an average of 72 hours. Eleven of the 21 patients had symptoms less than 24 hours and of the 11, 9 were in shock on admission. Seven nonoperative shock patients lived an average of 5 hours after admission. Seven nonoperative patients not in shock on admission lived an average of 36 hours. Only 2 patients in our series followed the course commonly described in which after an initial episode of shock they stabilized for a period before terminal hemorrhage occurred.² The other 19 patients did not survive the initial hemorrhage. Table 4 reveals the common clinical characteristics encountered. Severe back or abdominal pain accom-

panied with the correct diagnosis on the hospital sheet. Misdiagnoses included fecal impaction, gastrointestinal hemorrhage, volvulus of the colon, carcinoma of the prostate, cirrhosis of the liver, urinary-tract infection, renal colic, acute ruptured lumbar disc, lumbosacral sprain, and acute appendicitis.

In one period during their clinical course 7 patients in the untreated group would have been considered suitable surgical candidates if recognition and aggressive treatment had been instituted. In 14 patients surgery was not performed for the following reasons: Two patients were turned down by the surgeon as being terminal. One patient had an acute myocardial infarction as shown by electrocardiogram study. Four patients died while being prepared for surgery, and 5 patients were considered either too old or had far-advanced arteriosclerotic disease in other parts of the body. Two patients died in the hospital without any indication on the chart as to why surgery was not considered. These patients appeared from the charts to be acceptable candidates.

Six of the 7 patients undergoing attempted surgical correction either had sustained a period of severe hemorrhagic shock prior to surgery or were in shock at the time of surgery. Five of the 7 were in shock on admission and had been symptomatic for an average of 45 hours. All of the patients at surgical exploration were found to have massive retroperitoneal hemorrhage. Three of the patients lived beyond 24 hours. One patient is living and well today. Two patients died of cardiac arrest while undergoing surgery. One patient sustained an arrest necessitating open cardiac resuscitation during induction of anesthesia. This patient went on and had a successful resection of the aneurysm, only to die 4 days later of gangrene of the sigmoid colon secondary to the massive hematoma in the retroperitoneal area. Two patients died of irreversible shock and anuria in the recovery room. One patient died suddenly 7 days postoperatively from a rupture of a second thoracic aneurysm.

Discussion

We believe that the management of the intact aneurysm has been handled quite satisfactorily. Of the 34 patients only 3 who were thought to be suitable candidates for surgery were not treated. It should be emphasized that X-ray examination with the lateral view of the abdomen should give us a correct diagnosis in over 90 per cent of the

TABLE 4: Signs and Symptoms in 21 Patients with Ruptured Abdominal Aortic Aneurysms

Back pain.....	13
Abdominal pain.....	16
Pulsating mass.....	17
Shock.....	15
Low hematocrit.....	13
X-ray positive.....	10
X-ray negative.....	1
Known aneurysm.....	10
Misdiagnosed.....	9

panied with a distended pulsating abdomen and findings of oligemic shock are pathognomonic. It should be pointed out that the clinical picture at this stage is terminal and any surgical therapy now carries a high mortality. Before the stage of massive hemorrhage the clinical picture is that again of back and/or abdominal pain, a pulsating mass, and a frequent history of having known to have had an aneurysm. Combined with these findings, plain X-ray examination of the abdomen with a lateral view offers a high degree of accuracy in the diagnosis of an aneurysm.

Twelve of the patients were admitted to the

cases. Only in those patients in which the aneurysm is small or there is a question of differential diagnosis between an aneurysm and a retroperitoneal mass would aortography be indicated.

The extremely poor results in the management of ruptured aneurysms can be improved only by a consideration of surgery in these patients at an earlier stage in the clinical course of the disease. As has been pointed out from review of the cases there exists a period of 45 hours prior to irreversible shock in which these patients on the average could expect a higher survival rate. It should be noted that this figure can be deceiving. Over 50 per cent (11 patients) were symptomatic less than 24 hours before admission. Of these 11, 9 patients were already in shock. It becomes discouraging when one realizes that in 7 of the non-operative shock patients their average survival time after admission was only 5 hours. Five of the 7 patients died within 1 hour after admission. This leaves us with approximately 25 to 30 per cent of patients who will expire even before surgical correction could be contemplated. When one adds other major contraindications to surgery such as advanced age and arteriosclerosis to this given figure, the number of suitable candidates for surgery will be even less. The primary area in which there can be any hope of increased survival will be with those patients who are normotensive on admission. These patients were symptomatic for a longer period of time prior to admission and lived approximately 7 times longer in the hospital than those patients with shock on admission. In this group of 21 patients it should be emphasized that 10 were known to have had an aneurysm prior to its rupture. With the realization of the odds against the patient even coming to the operating room in suitable condition for surgery, the consideration of the patient as a candidate for elective resection once the diagnosis has been made is the largest factor in obtaining suitable survival with this disease.

It has been commented by some that the delay from the time of admission to the time of surgery has been a large factor in the mortality of the patient with a ruptured aneurysm. In 6 of our 7 patients surgery was begun within 4 hours after admission. In the case of 1 patient there was a delay of 6 days. Four of our patients died while being prepared for surgery. Three of these patients died in the emergency room in less than 1 hour after being admitted.

Summary

The analysis of 54 cases of abdominal aortic aneurysms seen over the past 3 years has been presented. Thirty-three patients were admitted with intact abdominal aortic aneurysms. Thirteen of these underwent elective surgical resection with no postoperative deaths.

Twenty-one cases of ruptured aortic aneurysms were seen in the same period. Seven of these were submitted to surgery with only 1 survival.

The management of intact aneurysms in the community hospital appeared quite satisfactory when compared to results of larger medical centers.

The greatest contributing factor toward the high mortality rate in abdominal aortic aneurysms is the delay in consideration of surgery once the aneurysm has been diagnosed. Once a rupture has begun a high percentage of the patients will be unacceptable for surgery simply due to the rapid downhill course of the disease.

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Patients Needed For Cancer Studies

THE COÖPERATION OF PHYSICIANS is requested in a study of Hodgkin's disease and lymphosarcoma being conducted by the National Cancer Institute at the Clinical Center in Bethesda, Md.

Particularly desired are patients who have had no previous treatment or minimal prior treatment. All clinical stages of biopsy-proven disease are acceptable. The major purpose of the study is to determine the curative potential of intensive radiotherapy in localized cases and to evaluate combination chemotherapy and X-irradiation in patients with generalized involvement.

Physicians interested in having their patients considered for the study may phone or write to Paul P. Carbone, M.D., The Clinical Center, National Institutes of Health, Building 10—Room 12N-228, Bethesda, Md. 20014; telephone: 656-4000, ext. 64251.

Plastic Unification of Bicornuate Uteri in Habitual Aborters (Strassmann Operation)

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IN AN HABITUAL ABORTER, when all other etiologic factors are ruled out, it is well to consider the possibility of a bicornuate uterus. When a bicornuate or double uterus is extreme, it can be readily diagnosed on bimanual examination. The lesser degrees are diagnosed by hystero-gram alone.

Any patient with a bicornuate uterus who has had 2 or more spontaneous abortions should be considered a candidate for the Strassmann unification operation. The object of this operation is to make a single uterus out of a double one, thereby enlarging the uterine cavity and giving the growing fetus a better opportunity to develop.

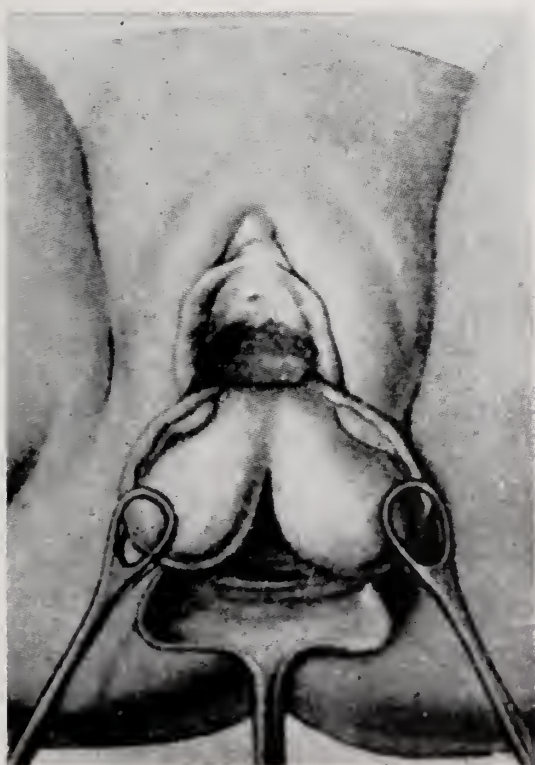


FIG. 1. Bicornuate uterus delivered vaginally preparatory to the unification operation (Strassmann's original operation).

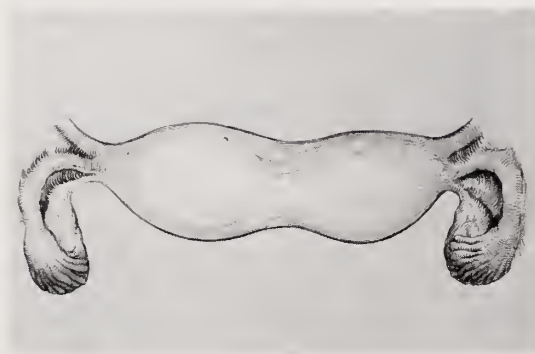


FIG. 2. Bicornuate uterus as it appears on the abdominal approach.

Paul Strassmann¹ in Germany did the first plastic unification operation in 1907 on a woman who had had 8 spontaneous abortions or premature deliveries. Following the operation she had 6 full-term living babies by the vaginal route.

The original operation was done vaginally by opening the anterior cul-de-sac and delivering the uterus externally (figure 1). This method was considered safer than opening the peritoneal cavity at that time. Strassmann did this operation on 18 women. In the first 8 the operation was done by the vaginal route, and the remainder were done by the abdominal approach (figure 2).

Following Strassmann's article the operation was done extensively on the Continent and reported in the German, French, and Italian literature. Forty-five years elapsed before the first paper was published in the American literature.

In 1961 Edwin Strassmann,² the son of Paul Strassmann, reported on 128 cases done by 51 operators. Out of the 128 cases there were 83 pregnancies, of which 71 went to term. Sixty-one were delivered vaginally and the remainder by cesarean section. There were no uterine ruptures.

Dunselman³ of Holland in 1959 summarized the world literature and reported on 290 Strassmann operations that were followed by 203

term pregnancies. One hundred and forty-five were delivered vaginally and 58 by cesarean section.

The incidence of bicornuate uteri ranges from 1 in 1,000 to 1 in 1,500 women. Many of these malformations go undetected since they cause no disturbances. Others cause disturbances but are not diagnosed on routine pelvic examination. With the use of hysterosalpingography many more uterine malformations have been diagnosed.

Because many of these women have concomitant urinary-tract malformations it is well to obtain intravenous pyelograms before surgery.

Classification of Bicornuate Uteri

1. Asymmetric Group:

The uterus has a rudimentary horn. Pregnancy may occur in a fully developed semi-uterus and proceed to term with no complications. However, pregnancy occurring in a rudimentary horn simulates the symptoms of tubal pregnancy, and rupture of a horn can be serious due to the involvement of the uterine artery. The only treatment is the immediate removal of the horn.

2. Symmetric Group:

A. *Septate uterus*. The uterus is divided by a septum which extends to the internal os.

B. *Subseptate uterus*. The septum does not extend as far as the internal os.

C. *Arcuate uterus*. There is concavity at the top of the fundus causing the so-called "saddle" formation.

D. *Uterus bicornis unicollis*. This is the bicornuate uterus with 2 horns and 1 cervix.

E. *Uterus bicornis bicollis* (uterus didelphys). This uterus has 2 horns and 2 cervices. There may also be a double vagina.

Report of Cases

Case 1. A 28-year-old white woman, first seen July 7, 1956, was complaining of infertility after 2 years of marriage.

Infertility work-up:

Protein-bound iodine	3.2 meg.
Endometrial biopsy	secretory endometrium
Hysterosalpingogram	bicornuate uterus with both tubes patent
Sperm count	85,000,000 per c.c. of semen, active all day
Rh positive, blood type O, and serology negative.	
Medication	thyroid extract gr. 2 daily.

History of pregnancies:

1. October 1958, aborted at 10 weeks.
2. August 1960, delivered stillbirth of 23 weeks' gestation.
3. February 1961, aborted at 10 weeks. September 1961, Strassmann operation was done.
4. June 1962, low cervical cesarean section at 38 weeks' gestation for transverse lie and premature separation of the placenta, and a 7 lb. 5 oz. male infant delivered.
5. January 1965, repeat elective cesarean section at 39 weeks, and a normal 8 lb. 3 oz. male infant delivered.

Case 2. A 23-year-old white woman, gravida I, Para 0, was first seen January 9, 1960, with her last menstrual period on November 30, 1959.

History of pregnancies:

1. February 1960, aborted at 6 weeks.
2. June 1960, aborted at 6 weeks.
3. July 1961, delivered a macerated stillbirth of 24 weeks. September 1961, hysterosalpingogram showed a bicornuate uterus. October 1961, a Strassmann operation performed.
4. May 1962, aborted at 6 weeks. Tissue obtained by dilation and curettage showed hydatidiform mole.
5. September 1963, low cervical cesarean section at full-term gestation; a normal 8 lb. 11 oz. male infant delivered.
6. Patient 16 weeks pregnant at present and proceeding uneventfully.

Indications for Strassmann Operation

Habitual aborters with secondary sterility. This is the main indication since divided uteri have small cavities and the pregnancies reach a point where the semi-uterus cannot expand further and abortion results. Restoring a normal breeding space by the unification operation may solve the problem.

Primary sterility. Strassmann feels that a double uterus may have an insufficient blood supply, especially in the medial aspect, creating a poor endometrium for nidation. This is explained by the fact that 1 uterine artery must supply each corpus. The operation should only be done for this indication when every other cause of infertility is ruled out.

Menstrual disorders. Severe dysmenorrhea is often seen in patients with double uteri. The operation may be considered only if the patient is completely incapacitated during menstruation.

Technique of Operation

The operation is begun by the vaginal ap-

proach. A vaginal septum, if present, is divided and ligated. The cervix or cervixes are dilated, the uteri curetted and iodoform gauze inserted up to the point of bifurcation. If a double cervix is present, the partition is split, making 1 cervical canal. The gauze packing aids in identifying the endometrial cavities when the uterus is opened.

The abdomen is then entered, and a transverse incision is made in the uterine fundus from 1 round ligament to the other. The incision is deepened and probed with Kelly clamps until each cavity is entered. The median part of the incision is cut through until the gauze is reached. This step is the same whether one splits the wedge of a septate uterus or the median walls of the divided uterine bodies. After the septum is removed the uterine cavity is explored with the finger to make sure that no remnants of septum are left.

Allis clamps are then placed opposite one another in the centers of the uterine incision, and by making traction anteriorly and posteriorly the cavities are converted into 1 and repair is done vertically (figures 3, 4 and 5).

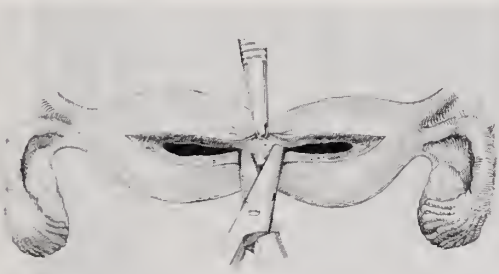


FIG. 3. Transverse incision in fundus, the septum being divided and removed.

Jones and Jones¹ reported a modification of Strassmann's technique in which they incised the uterus vertically, removed the septum, and repaired it the same way. They did this procedure in 6 cases.

Summary

The history of the Strassmann operation has been reviewed. The incidence and classification

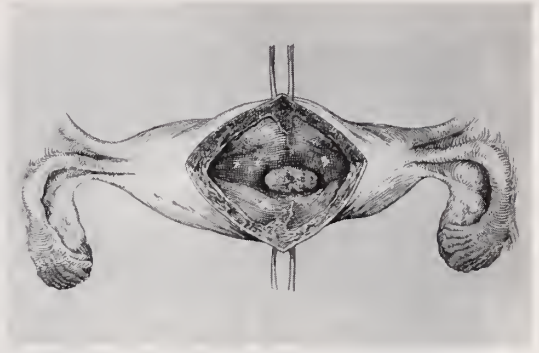


FIG. 4. Traction made on Allis clamps in opposite directions to outline closure.

of bicornuate uteri have been given. Two cases of habitual aborters have been reported who have had successful term pregnancies following Strassmann operations. The unification operation should be considered in any patient with a bicornuate uterus who has aborted 2 or more times and in whom all other causes of infertility have been ruled out.

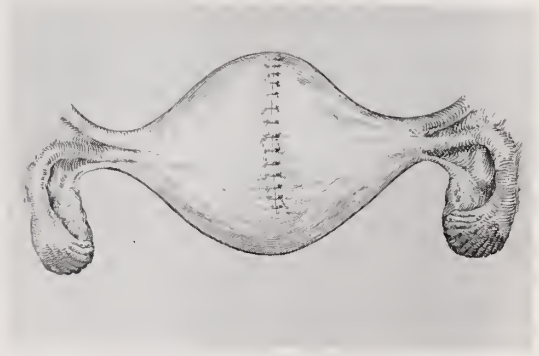
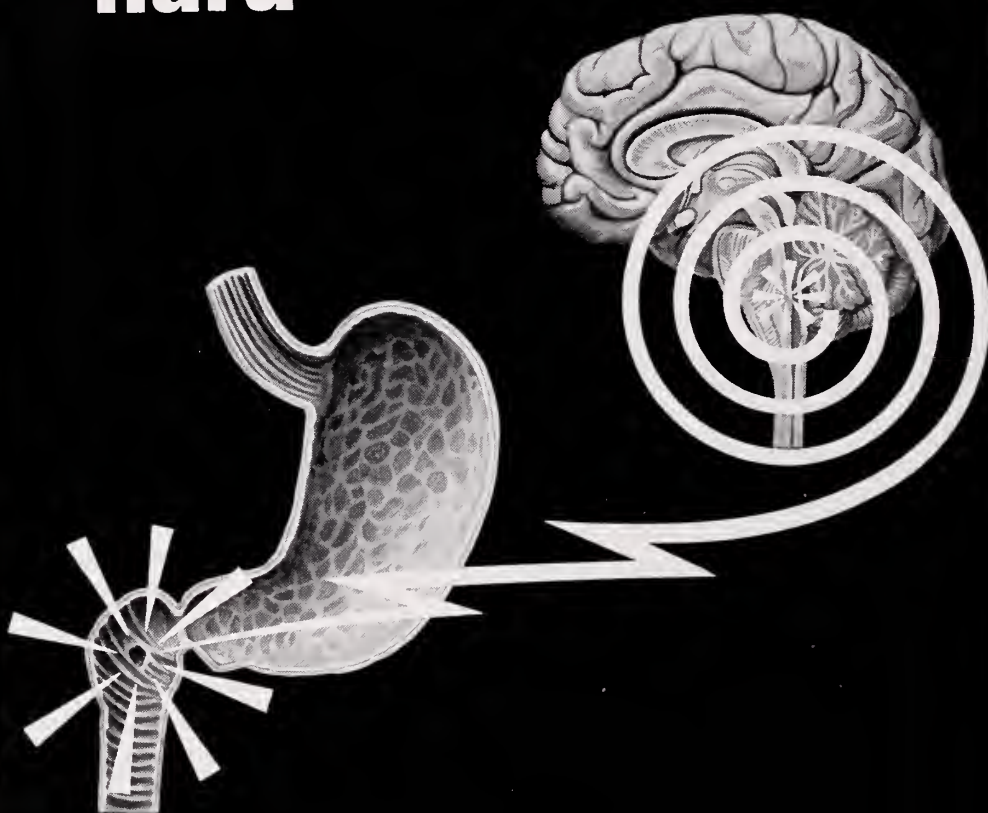


FIG. 5. Uterus closed vertically, making 1 endometrial cavity.

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PRESIDENT'S PAGE

CHILDREN'S HOSPITAL



NO ONE CAN PREDICT the economic health of our hospitals. Medicare will place a tremendous burden upon existing facilities. The role and interaction between the few facilities responsible for hospitalization and the resultant compromises necessary for a successful patient-doctor relationship are at present unknown.

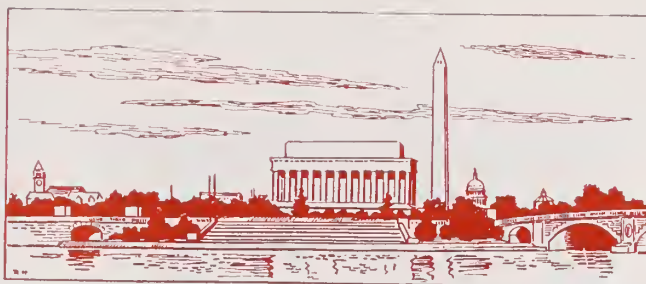
There are many hospitals in our area, each worthy of discussion. For instance, Providence Hospital, which recently celebrated its one hundredth anniversary, is supplying the scientific papers which appear in this issue of the ANNALS. The Cafritz Hospital under construction in Southeast Washington will be the only new hospital outside of Northwest Washington. Naturally, it will fill a great void and necessarily service a large geographic and population area. It deserves the moral and economic support of all area physicians and citizens. What follows in this article applies, however, to another hospital, Children's, but the lessons it teaches could be of great value to the new Cafritz Hospital as well as to others.

Children's Hospital is a traditional institution. It is very meaningful to a native Washingtonian who has had Central High School cinders picked out of his knees by a Children's Hospital intern over 30 years ago and has observed his own children being treated with the most modern techniques in various departments of the Hospital. As a student my pediatric training was received at Children's, and as a participant in community enterprises the vitality and importance of Children's have been vividly demonstrated to me. Yet we know the Hospital's traditional policy of admitting all children solely on the basis of their need for medical care has produced serious and continued fiscal difficulties. The recent survey of Children's requested by the Government and conducted by 2 independent groups, one medical and the other financial, produced some fascinating reports which should be read by all who are concerned with patients, hospitals, medical schools, and any related medical activities.

Dr. Robert Parrott's testimony before the Public Health Advisory Council on April 27, 1965 is also well worth reading. He said, "According to the team of survey firms, the Government of the District of Columbia should recognize that Children's Hospital is a major necessary resource of unusual excellence in the District; therefore, the Hospital should be considered a specialty hospital" and be given special consideration by the major contractors purchasing hospitalization for their clients and subscribers.

The medical profession cannot allow the current emphasis on chronic disease, geriatric care, nursing homes, wars on poverty, etc. to dilute the most essential link in the whole chain—health care for children. We are proud of our Children's Hospital and will continue to support its needs physically as well as financially and to uphold its fine traditions.

Paul R. Wilner



EDITORIALS

Better Training Methods for Both Teachers and Clinicians

MOST READERS OF THIS JOURNAL have affiliation, either exclusive or occasional, with community hospitals. The spectra of diseases seen in these hospitals vary, and, since there is no certain way of screening an admission to discern the routine from the complex, problem cases will, as a matter of course, be in the roster of any community hospital. Every person in any hospital, regardless of the complexity of his disease, is entitled to the proven best in the way of diagnosis, management and treatment.

In most, preferably all, nonaffiliated community hospitals, good total medical care is the goal, and it is fully realized that such service is predicated upon a program of continuing medical education. This latter results in an academic atmosphere with its inquisitiveness, thoroughness and stimulus that compels good total service.

Community hospital staffs, knowing Medical Training programs to be a basis for good total service, have in the past decade found themselves coping with a trend that has reduced the number of applicants for their training programs. The intern and residency programs in these hospitals are primarily aimed to train men for clinical practice. Community hospitals that have the desire and the capability to maintain programs are struggling to continue in the education of doctors to enter practice. Basic research facilities are not commonly found in these institutions, nor are they

usually feasible. Clinical research is possible, practical and desirable. The university centers are training large numbers of men, but it appears that the number destined to enter private clinical practice is low.

The practitioners of medicine in our Nation are lauded as the basis for good medical care; but it would appear that the stimulus for full-time men in institutional medicine being stressed at the larger centers is reducing the numbers of skilled physicians entering private practice.

A median must be found between the university center training men for teaching careers and the community hospitals training men for practice in general and specialty fields. A suggestion is presented: In the setting of a university center and community hospitals, within a practical radius, willing and desirous of training, the future teacher candidate could spend $\frac{2}{3}$ of his training in the university center and $\frac{1}{3}$ in an affiliated community hospital. The candidate for clinical practice could spend $\frac{2}{3}$ of his training in an affiliated community hospital and $\frac{1}{3}$ in a university center. Each then would secure a deeper appreciation of both the full-time teacher and practitioner.

THOMAS E. CURTIN, M.D.
*Chairman,
Department of Medicine,
Providence Hospital*

Preschool Vaccination

PREPARATIONS for the coming fall term of the school year, already in progress this summer with Project Headstart, are remindful of the need to publicize among physicians and laymen alike the

urgency of not vaccinating (smallpox) children suffering from eczema or other chronic diseases of the skin in order to avoid the serious hazard of generalized vaccinia. It has become necessary to

Opinions expressed in contributions to the Editorial Section are those of the writers and do not necessarily reflect the views of the Medical Society of the District of Columbia

stress this interdiction because of the several reported incidents of generalized vaccinia. These reports would seem to indicate a lack of appropriate concern for the potential untoward effects of smallpox vaccination in children with even minimal involvement of the skin.

Parents who are seeking admission of their unvaccinated children to school should be questioned not only about the candidate's history of eczema or other current skin disease but also made aware of this contraindication to vaccination for other

members of the household, including employees and guests.

The success of vaccination programs in preventing epidemic smallpox attests the usefulness of this simple and rewarding procedure. However, because this "routine" procedure serves as an effective immunizing measure largely via the vaccination of children being admitted to school, we must not lose sight of the potential hazards involved to the patient and his contacts.

N. M. K.

Warning re Use of the Contraceptive Coil

THE EVER-GROWING CONCERN about the population explosion and efforts to control it have stimulated frenzied efforts by workers in the field of family planning to find a low-cost, simple, and safe method for contraception. The remarkable growth in the past 3 years in the number of available birth control pills is ample evidence of this trend.

The most recent mechanical device for birth control has been the introduction of the intra-uterine plastic coil. This is not a new idea. It is a modified plastic version of the old Grafenberg gold ring which was introduced in Germany about the turn of the century. The Grafenberg ring, for one reason or another, never became popular in America although it was used fairly widely in Europe. About 3 years ago the Food and Drug Administration gave its approval to the plastic coil, thus making it available for use as a birth control device in planned parenthood centers.

Since its introduction the use of the coil has become widespread and it is considered the best possible means of contraception in use today.

Now a word of warning. In the May, 1965 issue of *Industrial Medicine and Surgery*, Dr. J. Ernest Ayre reports cytologic findings in cervical smears from women using the coil which suggest that the plastic device may play a role in the genesis of cervical cancer. Two of Dr. Ayre's patients with normal cervical smears developed dysplasias after insertion of the coil, and 3 patients with mild cervical dysplasia developed an explosive rate of growth of the cellular changes after insertion of the coil. It has been known for a long time that polyethylene plastic embedded in certain animal tissues could produce malignant changes. This finding may be true for human tissue. In the light of this knowledge the use of the plastic coil as a contraceptive device may not be the much heralded boon to humanity as initially thought. The lesson to be learned from this is that until such time as the safety of the plastic coil is proved by many clinical trials, patients using the coil must be kept under observation and have the benefit of periodic cervical smear examinations.

J. KEITH CROMER, M.D

The Missing Million*

WHO DECIDES how much the UGF goal will be? Who figures out how much it takes to support 143 agencies? We keep hearing that the goal isn't enough to give the agencies what they need; that we must give more than the goal to "close the gap." Why the gap? Why not set the goal at what is needed? These questions bother a lot of people, so we looked for some of the answers.

First of all, the "agency needs" are based on budgets prepared by each agency, according to a

realistic estimate of the minimum they must have to carry on their work. If you add up all these budgets, the total is in excess of \$10 million. But the UGF goal is only \$9,200,000. Why the missing million?

If your family is fairly typical, you can probably find the answer right at home. If you ask each member of your family to list what he absolutely must have in the next 12 months, the total is apt to be startling if not terrifying! And it will be well in excess of your anticipated income.

That, in essence, is UGF's story. We—you

*From the Editor's Kit submitted by Mr. Paul J. Truntich, Chairman, and Mrs. Laurette G. Hupman, Co-chairman, of Industrial Publications for the 1965 United Givers Fund Campaign.

and I—have made it pretty clear through the years what we can be expected to give when UGF time rolls around. Most of us give a little more each year, because more of us are working, and our incomes keep going up. The business, Government and community leaders who sit down together to assess the campaign have learned to be reasonably accurate in judging how much we'll be willing to give if we're convinced that the money is needed. And then they add a little more to the goal to give us a challenge to shoot at and to make some progress in closing the gap.

You can find more of the answers if you visit the Washington Hearing Society and see the miracles performed in a dilapidated building by dedicated staff members who sometimes pay bus fare for a child out of their own meager salaries because that's the only way he can get there. Or Northwest Settlement House that manages to serve hundreds of families in the heart of the Second Precinct out of a tiny cinder-block building with only 6 full-time staff members. These are just 2 typical examples of how UGF agencies keep on giving service even though we meet the goal but not the needs.

1965 is the Campaign of the Missing Million. Give till it helps!



THE WOMAN'S AUXILIARY to the Medical Society of the District of Columbia presented a check of \$800 to Mr. Donald F. Smith, Administrator of Children's Hospital, May 1, to be used to purchase a Refrigomat Vaporizer for the Hospital. This picture, taken in the Intensive Care Unit at Children's, shows (left to right) Mrs. Russell E. Iler, Chairman, and Mrs. Francis J. O'Bryan, member, of the Auxiliary's Philanthropic Committee; Mr. Smith; and Mrs. Hugh O. House, President of the Auxiliary for 1964-65.

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Change in Influenza Vaccine

A SLIGHT CHANGE in the composition of influenza vaccine for the 1965-1966 season has been announced by the Surgeon General of the Public Health Service, Dr. Luther L. Terry. In addition to the representatives of the 4 influenza virus strains—A, A₁, A₂, and B—which are used in the current vaccine, the next season's formula will include another A₂ strain, isolated in Taiwan in 1964. This strain is closely related to the A₂ strain which has been associated with epidemic influenza during the past season.

After careful consideration of the data, the Division of Biologics Standards advised the manufacturers to proceed with the manufacture of a vaccine in which the A₂ influenza virus strain representation is equally divided between Japan/170/62, the current A₂ representative in the vaccine, and Taiwan/1/64.

"It is clear that we continue to be in a period of antigenic change," Dr. Terry said, "and that examination and analysis of the strains isolated in this country and abroad during the current season, or later in the present year, may call for further recommendations."

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References: 1. Goldsmith, J. W.: Minn. Med. (Feb.) 1957. 2. Groskloss, H. H., Clancy, C. L., Healey, E. F., McCann, W. J., Maloney, F. D., Loritz, A. F.: Clinical Medicine (Sept.) 1955. 3. Codling, J. W., Lowden, R. J.: Northwest Med. (March) 1958. 4. Bethea, R. C.: International Record of Med. (May) 1960. 5. Lenz, W., Second International Conference on Congenital Malformations, N. Y., N. Y., (July) 1963.

Side effects: the incidence of drowsiness and other atropine-like effects is low. However, caution patients engaged in activities where alertness is mandatory.



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Report of Delegates to the AMA House of Delegates

New York City, June 20-24, 1965

YOUR DELEGATES wish to report on a session of the American Medical Association which was the largest and also the most tension-filled one we have seen. Total registration for the meeting was 64,517, of which nearly 25,000 were physicians.

The subject of primary importance before the House of Delegates related to the future stand of the medical profession in relation to the projected "Medicare" law. Some advocated a position of nonparticipation by the AMA, while others, including your delegates, under instruction from the Executive Board and because of their own beliefs, opposed such a move. The House of Delegates did refuse to establish any policy of nonparticipation but reminded each physician that it is his personal obligation to decide for himself whether accepting responsibility for any case permits him to provide his own highest quality of medical care.

The House reaffirmed Section 6 of the Principles of Ethics as well as the Bauer Amendment of 1961 which says, in part, "... the medical profession will render that care according to the system it believes is in the public interest, and that it will not be a willing party to implementing any system which it believes detrimental to the public welfare." The House of Delegates further instructed the AMA Board of Trustees to embark on an active campaign to inform its members of the grave considerations in adhering to our Principles of Ethics posed by legislation pending before Congress.

In regard to the report of the President's Commission on Heart Disease, Stroke, and Cancer, the House of Delegates opposed those particular recommendations which would result in unproven sweeping changes in the pattern of medical research and education and patient care and called for component state medical associations to conduct conferences with medical educators, hospital staff, and medical society representatives and to exchange information and develop recommendations for continued improvement of medical research and education and patient care. The results of these conferences are to be sent to the AMA for use by its Councils and Committees.

The Gundersen report on the reorganization of the House of Delegates was deferred until the Clinical Meeting in November, 1965. Several portions of this report were opposed by your delegates, namely, the suggestion that all resolutions

for consideration must be filed 10 days before a meeting and the reapportionment of representation in the House from the present 1 delegate for each 1,000 members to 1 for each 1,250, with no provision protecting the present representation of any state from being reduced.

In other actions the House of Delegates reaffirmed its policy concerning the professional standing of anesthesia, radiology, pathology, and physical medicine; urged the establishment of cancer registries in all hospitals; asked the Board to review the subject of Federal assistance for operating expenses for health and medical education facilities; adopted resolutions favoring control of air pollution and tuberculosis; raised several questions as to the effect on medical manpower of the Peace Corps program and its relation to military service; elected Dr. Charles L. Hudson of Ohio as President-elect.

Your senior delegate served well on the Reference Committee on Public Health and Occupational Health at this convention.

Respectfully submitted,

C. WILLARD CAMALIER, JR., M.D.

RAYMOND T. HOLDEN, M.D.

Delegates

News Notes from AMA Convention

DR. VERNON E. MARTENS, Director of Laboratories at the Washington (D.C.) Hospital Center, offered a new clinical pathology test to physicians at the 114th Annual Convention of the American Medical Association in New York, June 20-24. The new test was the T-3, an isotope determination for thyroid function. Sixteen other tests chosen to detect early and perhaps reversible signs of chronic degenerative diseases were also offered.

Dr. Martens reported that 43.8 per cent of those tested last year had abnormally high cholesterol counts, 25.9 per cent were abnormal in the glucose test, 23.7 per cent were abnormally high in urea nitrogen, and 19 per cent in uric acid.

Dr. Martens succeeded the Exhibit Laboratory's 4-year Director, Dr. Thomas M. Peery, head of pathology at George Washington University Hospital.

Dr. Charles L. Hudson, of Cleveland, Ohio, is

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the new President-elect of the AMA. Dr. Hudson has served on the AMA's Board of Trustees since 1961. He practices in the Cleveland Clinic and holds associate professorships in medicine and preventive medicine at Western Reserve University in addition to his practice. He is also director of the University's Health Service. He was President of the Ohio State Medical Association in 1955-56.

Dr. James V. Appel, surgeon and general practitioner of Lancaster, Pa., was installed as the 120th President of the AMA on June 20. Dr. Appel was elected to the AMA Board of Trustees in 1957 and was reelected to a 5-year term in 1960.

Dr. Tinsley R. Harrison, of Birmingham, Ala., was chosen by the House of Delegates as the 1965 winner of the AMA's Distinguished Service Award. Dr. Harrison is well-known for his work on cardiovascular diseases. His textbook, "Principles of Internal Medicine," is widely used in American medical schools.

The AMA's 1965 Scientific Achievement Award went to Edward C. Kendall, Ph.D., a former Nobel Prize winner. Dr. Kendall was at the Mayo Clinic in 1949 when he, Dr. Philip Hench, and 2 associates collaborated in investigating the effects of cortisone and ACTH on rheumatoid arthritis and in rheumatic fever. Dr. Kendall now is Visiting Professor of Chemistry at the James Forrestal Research Center at Princeton University.

Dr. Charles B. Huggins, Director of the Ben May Laboratory for Cancer Research, Chicago, was selected by the Board of Directors of the Passano Foundation to receive the \$5,000 Passano Award for 1965. The presentation was made at a dinner on Monday evening.

Drs. Andrew P. Ferry and Lorenz E. Zimmerman, of the Armed Forces Institute of Pathology,

were awarded the Billings Bronze Medal for their exhibit, "Lesions Mistaken for Malignant Melanoma of the Ciliary Body and Choroid." Dr. Zimmerman is an Associate member of the D. C. Medical Society.

Other Washington, D. C. award-winners in the Scientific Exhibit were: Certificate of Merit to Dr. John H. Bayly, of the Washington Hospital Center, for his exhibit on "Umbilical Vein Approach to Study of the Portal Blood, Portal Pressure, Portal Vein Outline and Space Occupying Lesions of the Liver" (Section on Radiology); Honorable Mention to Drs. Charles A. Hufnagel, John F. Gillespie, and Peter W. Conrad, of Georgetown University Medical Center, for their exhibit on "Cardiac Valvular Replacement by a Universal Discoid Valve" (Exhibit Symposium on Cardiac Valve Prostheses).

Dr. Milton L. Goldman, Washington surgeon, was a winner again in the 28th Annual Exhibit of the American Physicians' Art Association. He took first prize in Portraits.

Dr. Raymond M. McKeown, of Coos Bay, Oregon, President of AMA Education and Research Foundation, accepted a check of \$320,121.87 from Mrs. William H. Evans, of Youngstown, Ohio, President of the Woman's Auxiliary to the AMA. In presenting this contribution Mrs. Evans noted that the Auxiliary has donated a grand total of \$2,148,209.07 to AMA-ERF since the Auxiliary adopted the project in 1951.

In an announcement of officers of the 22 Scientific Sections of the AMA, names of the following Washington physicians were noted:

Dr. Robert H. Barter, Secretary, Section on Obstetrics and Gynecology; Dr. J. Winthrop Peabody, delegate, Section on Diseases of the Chest; alternate delegates: Dr. Laurence H. Kyle (Section on Experimental Medicine and Therapeutics), Dr. Oscar B. Hunter Jr. (Section on Pathology and Physiology), Dr. A. B. C. Knudson (Section on Physical Medicine); and Dr. Martens, assistant representative to scientific exhibit (Section on Pathology and Physiology).

Two veteran State Medical Society executives who are retiring this year received the acclaim of the AMA House of Delegates. They were Dr. C. Grenes Cole, who retired July 1 as the Secretary-Treasurer of the Louisiana State Medical Society, a post he has held for 15 years, and Mr. Harvey T. Sethman, Executive Secretary of the Colorado Medical Society for 36 years. Dr. H. Ashton Thomas is Dr. Cole's successor.

MEDICO Orthopedics in Tunisia

LEONARD T. PETERSON, M.D., F.A.C.S.

Associate Clinical Professor of Orthopedic Surgery, George Washington University School of Medicine

FOLLOWING OUR TRIP TO JERUSALEM, Jordan, in October 1961, Mrs. Peterson and I had looked forward to another trip under the auspices of MEDICO. The program in Tunisia began in October 1964, and we volunteered for the month of March 1965.

Tunisia is the smallest North African country and is strategically located opposite Sicily where it has been the center of many historic activities during the past 3,000 years. Tunisia is about the size of the state of Louisiana, with a population of over 4,000,000 people, 95 per cent of whom are of the Islamic faith. The principal city is Tunis, with about 400,000 inhabitants. The north and central parts are mountainous; the coastal area is fertile plains, while the south is desert, with an indistinct boundary in the Sahara.

A MEDICO Orthopedic Program was started in Tunisia in September 1964 at the Ernest Consiel Hospital in Tunis. A modest apartment is available for living quarters in the city of Tunis and the consultant pays for maid service and a small automobile, which is very essential. As in other orthopedic overseas programs, the physician who spends a short period of 1 or 2 months pays all his travel and expenses.

Dr. Mohammed Kasab, who spent many years in orthopedic training in Paris, returned in 1964 and is doing an excellent job as head of the Orthopedic Service. He is assisted by several orthopedic surgeons, including Dr. Juan Olivera, a Spaniard, who took his orthopedic training in Columbus, Ohio, and is serving 2 years with MEDICO. Several excellent nurses under MEDICO or the Peace Corps have contributed to the establishment of a good Orthopedic Service. A new orthopedic hospital is under construction and should be ready for occupancy within a year. This hospital will include the most modern equipment and will have excellent facilities for orthopedic treatment.

About half the patients have residuals of poliomyelitis, which has been widespread in this part of the world. The outpatient clinic is very active, and it is evident that there is a tremendous backlog of reconstructive orthopedic surgery. I spent 1 month as consultant at this hospital participating

in ward rounds, clinics and surgery. The dominant languages are Arabic and French. Fortunately, the doctors and some of the nurses spoke English so I was able to communicate with moderate shortcomings.

The patients presented few complaints in reference to their feet, knees, or back, although the Tunisians walk many miles daily, often barefoot over rough terrain, and their activities require squatting and kneeling and an excessive amount of carrying and back bending. There is a moderate amount of tuberculosis. One patient had been sent home for bed rest and the usual medication for a period of several months. Upon his return it was learned that the pharmacist was unwilling to give him more than 1 day's medication at a time, and he had to walk 9 kilometers daily for his medication, which interfered with his prescribed treatment. I saw a few patients with fracture of the hip, more in men than in women. While I do not know the statistics on longevity of the sexes in this area, it is doubtful if the women survive the men to the same degree as they do in our country. One old gentleman with a fractured hip knew his age because he was 9 years old when the French took Tunisia in 1881.

Echinococcus is rather common in Tunisia, and occasionally bone complications are observed. The dog is the intermediate host, and apparently little is done to control this domestic pet. I saw several cases of echinococcosis on the surgical service with involvement especially of the lungs and liver. I expected that peptic ulcers would be rather uncommon among the Tunisians but was told that many ulcers were observed about 2 weeks after Ramadan, the month of fasting, when the diet is inadequate and contributes to increased acidity and perforation.

One of the highlights of our visit in Tunisia was a trip to a blind school on the outskirts of Tunis. Blindness is very common due to many causes including trachoma and ophthalmia neonatorum; the latter is now being effectively prevented. The discipline among the blind students was superb, and I felt that the administration was doing a splendid job with limited facilities. The playgrounds were well conducted, the rooms were

a working analgesic for the working arthritic



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Arthralgen-PR is generally contraindicated in patients with uremia and viral infections, including poliomyelitis, vaccinia, ocular herpes simplex, and fungus infections of the eye. It is also contraindicated in patients with chickenpox or susceptible persons exposed to it.

PRECAUTION: Reduction in dosage of Arthralgen-PR given over a long period should be gradual, never abrupt.

SIDE EFFECTS: Nausea, GI upset, or mild salicylism may rarely occur. Symptoms of hypercorticism dictate reduction of dosage of Arthralgen-PR.

DOSAGE: One or two tablets four times a day. After remission of symptoms dosage should be reduced to the minimum maintenance level.

REF: 1. Boreus & Sandberg, ACTA. PHYSIOL. SCAND., 28:266, 1953.

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in perfect order, and hygiene indicated high standards. Children came to this school for their elementary education and were sent elsewhere for higher education. Occasionally a child was sent here who had never lived indoors or slept in a bed, and he required training to get him to sleep on the bed rather than under it.

Local Color

The history of this country (see addendum) explains the very interesting mixed population with great variation in color and features. While the Arab influence has been dominant, it has been mixed with the native Berbers, who formerly occupied this land, the Turks, the Italians, the Spaniards, and no doubt a few Americans. Over the centuries there has been considerable influence from the darker races beyond the Sahara. It is interesting to speculate that if the great Sahara Desert had not existed, black Africa may have spread all over Europe, and perhaps few integration problems would have existed these many centuries later.

The mixture of dress is as varied as the people, with almost equal distribution of Western and Arab garb being observed in Tunis. The women wear a white sheet wrapped around them rather gracefully, and this is known as a *safsari*. While they may cover their face with this garment, I noticed that their gaze is always very direct and open compared to my observations of women in the Middle East.

Of interest too, in the city of Sfax, 200 miles south of Tunis and the largest port of Tunisia, Western dress was more predominant although this city is closer to the desert. The government and the people of Tunisia are moderately oriented to the West as we have recently observed by the statements of President Bourguiba in relation to the European countries and the continued recognition of Germany.

Tunisia has a number of beautiful hotels which are attracting the tourist traffic. These hotels at Bizerte, Monastir, Djerba, and elsewhere are in sharp contrast to the surrounding landscape and villages. Each city has its *souk* with the old narrow streets and crowded living quarters in which one feels strange, probably somewhat through the influence of our mystery movies.

The tourist trade is largely European; it is hard to find a room in the better hotels, which are occupied especially by the Germans and British who come for a holiday on a package deal. We found the people of Tunisia very friendly and very tolerant of our ignorance of Arabic or French.

Throughout our month's visit we did not have one indication of unfriendliness or a hostile gesture.

Antiquities

We endeavored to see as much of Tunisia as possible in our spare time. There are many places of great historic interest, and as usual one is especially impressed by the durability of the Roman construction. Very little remains of ancient Utica. Carthage has been excavated to a moderate degree, but ancient Carthage was completely destroyed by the Romans, who later rebuilt it on a lesser scale. The present remains are of Roman rather than Punic vintage. The coliseum at El Djem, between Sousse and Sfax, is only slightly smaller than the one in Rome and is in a comparable degree of preservation. As one drives down the long straight highways from either the north or south, the coliseum gradually looms into view surrounded by a small Tunisian village. It remains a puzzle that this great coliseum was built in this area so far from either city or seacoast.

Kairouan was established as a holy city when Tunisia was first occupied by Arabs. It was considered the fourth most holy city in Islam, following Mecca, Medina and Jerusalem. It was off limits to the infidel or non-Moslem until the French occupation in 1881, but since that time the famous mosque has been opened to tourists. The mosque does not compare in structure or beauty with many of the beautiful mosques in other parts of the world, but its religious significance is deep-rooted. Many Moslems who have not been able to make the journey to Mecca have considered several trips to Kairouan adequate pilgrimage, and many who could afford it have had their remains sent here for burial.

We made a quick trip to Douga one afternoon, traveling 90 kilometers from Tunis in our small Renault. Douga is one of the better preserved Roman ruins built high on a hillside, and reminded me of Delphi. A visit here should be made in the afternoon when the sun is most favorable for photography.

We spent one weekend at the island of Djerba, about an hour's flight from Tunis. Djerba lies in the bend of the Mediterranean at the lower border of Tunisia, only a few miles from the mainland, and is an island about 15 miles in diameter. This is the land of the lotus-eaters where Homer's Ulysses found some of his sailors about to desert because they had succumbed to the climate and easy living. He quickly got them back on the rough seas and away from the land of the lotus-eaters. Apparently lotus represented the fresh

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fruit and vegetables which were found delicious by Ulysses' sailors, who also enjoyed the comfortable, pleasant living after their long journey on the rough seas. We enjoyed Djerba and the interesting Arab village of Hount Souk, but they did not hold quite the same fascination for us, and we were not tempted to linger.

U. S. in Tunisia

The contribution of the United States is quite evident in Tunisia, but we are not alone in the foreign-aid program, where many Western countries as well as Communist countries are playing an active part. Our programs include USAID, CARE-MEDICO, Peace Corps, and others, including religious volunteer groups. I always had mixed feelings about the value of the Peace Corps, being unfamiliar with it in action. Following a visit with about 40 of our American Peace Corps volunteers at the home of the director one evening, I concluded that they were a fine group of young people, dedicated in their efforts and excellent representatives for us in a foreign land.

MEDICO is doing an excellent job, and its affiliation with CARE has improved the administration of our program. Tunisia is one of the better assignments in Orthopedics Overseas. The duties are much like that of a consultant or a

visiting professor, not too strenuous by our standards in private practice, but the experience was very interesting and I hope, to some degree, fruitful.

ADDENDUM: For those who are interested in a brief history of this part of the world I am appending the following paragraphs.

The origin of the name Africa (in Arabic pronounced like *Ifriqiya*) is a mystery. It was first used by the Romans in relation to North Africa, and particularly the area about Tunisia, and the name eventually applied to the entire continent. The first known colony established in Tunisia was Utica, which was founded by the Phoenicians about 1100 B.C. Carthage was established in 822 B.C. by the Phoenicians, and it became the capital of the Punic Kingdom which ruled the Mediterranean from Syria to Britain and dominated North Africa and Spain. The rivalry between ancient Carthage and Rome led to a series of 3 Punic wars. In 217 B.C. Hannibal began his famous campaign from Spain, crossing the Alps with his elephants until he reached the walls of Rome in 211 B.C. Sicily was lost to Rome in 210 B.C., Spain in 207 B.C., and Hannibal returned to Carthage to be defeated by Scipio in 203 B.C. Carthage was finally destroyed by Rome in 146 B.C., when 50,000 who remained of the original 700,000 inhabitants of Carthage were sent into slavery.

Julius Caesar was reputed to have visited Tunisia in 46 B.C. (after visiting Cleopatra). Carthage was rebuilt under Augustus Caesar, but it never regained its former glory. Carthage remained Roman until conquered by the Vandals in 439 A.D., and from this point they sacked Rome about 15 years later. The Vandals were defeated by the Byzantine Empire in 530 A.D., and this area remained under the oppressive rule of the Byzantine Empire until the Seventh Century, when the great Arab conquest swept North Africa through Spain until it was halted at Tours in 732 A.D., just 100 years after the death of the Prophet Mohammed. North Africa was under Moslem domination for almost 1,200 years, although it was by no means at peace during this time. There were many rival factions and dynasties. For a brief interval, from 1535 to 1574, Tunisia was under the control of Spain until it passed to the rule of the widespread Turkish Empire, which held it until 1881. For many years this part of the North African coast was the headquarters of the Barbary pirates who preyed upon world shipping. Stephen Decatur led a brief naval campaign in this area in 1801. Slavery, which was widespread throughout Africa and much of the world, including the United States, was officially abolished in Tunisia in 1842.

Tunisia was conquered by France in 1881, and French domination continued until the independence of Tunisia in 1956. Efforts at independence were started in 1920 under Habib Bourguiba, who worked in exile from 1945 to 1949 and later returned to become a national hero and to establish Tunisia's independence; he became the first president, the office which he now holds.

The history of Tunisia would not be complete without some reference to World War II. Tunisia remained under the control of the Vichy French régime and fell into the hands of the Germans. Late in 1942 the Americans and Free French moved in from the west while the British pushed the Germans eastward into Tunisia, where a vigorous campaign was fought for about 6 months, until the Germans fled or surrendered. The Americans lost about 10,000 in the North African campaign; a third of this number lie buried in the beautiful cemetery at Carthage, another third have been returned to the United States, and the remainder who were missing have their names inscribed on the wall facing the cemetery.

Any Volunteers for Project Vietnam?

THE NUMBER OF AMERICAN DOCTORS in Vietnamese provinces will soon be increased through a joint effort of the Agency for International Development and a new voluntary organization known as "Project Vietnam." Dr. William B. Walsh, founder and President of Project HOPE, was designated by President Johnson to chair the medical recruitment program.

Under the program, American doctors will volunteer for 2 months' service in Vietnam. The program will provide 20 doctors at a time and will more than double the number AID has assigned to Vietnam at the present time. It was created in response to the President's request for more U.S. medical assistance for Vietnam. Project Vietnam is being administered by The People-to-People Health Foundation, Inc., Washington, D. C.

Project Vietnam will provide transportation and a monthly subsistence allowance for each doctor. An AID contract signed with the voluntary organization calls for an expenditure of \$500,000 a year over a 3-year period.

AID now has medical teams in 4 provincial cities: Danang and Nha Trang on the coast, and Can Tho and Rach Gia in the Delta. Each team is made up of 2 or 3 physicians, a like number of nurses, 1 laboratory technician, and 1 hospital administrator. In addition, 6 U.S. Army physicians are presently on loan to AID for service in 6 other cities. The American teams work closely with their Vietnamese counterparts.

Seven other countries have sent teams of doctors to Vietnam: Australia, Holland, Italy, Korea, New Zealand, the Philippines, and Taiwan. Each is represented by a team of 2 to 4 doctors, and the Philippines by 3 teams in the field.

The new organization will review applications

from volunteers. Requests for information should be directed to: Project Vietnam, 2233 Wisconsin Avenue, N.W., Washington, D. C. 20007.

Health Dept. Notes

Public Health Nursing: Thirty Years in Washington

PUBLIC HEALTH NURSING has long been a basic function in all health jurisdictions. It is a traditional method for providing direct health services to the individual citizen and to the community. In some rural and isolated areas and in many places abroad it may be the only evidence of health interest on the part of the political authority. It is altogether a respected and approved activity.

Public Health nursing, by that name, was 30 years old in the District of Columbia on August 12. It was on this date in 1935 that the 36 nurses who had been working in various departmental programs were brought together into a single unit and designated as Public Health nurses.

There seems to be a nostalgic affection for Public Health nurses, growing out of their early roles of giving care to patients in the home. They are identified with aiding in disease control; giving prenatal and postnatal care to mothers and their babies; instructing entire families in disease prevention and good health practices; working with the physician, assisting in patient rehabilitation, and performing myriad other duties.

Most of these traditional services still exist and are still carried out by the Public Health nurse. But both her numbers and her responsibilities have been greatly expanded, and there are now throughout the D.C. Department of Public Health almost 400 positions for these nurses and aides.

They operate through the Bureau of Nursing and in 4 major divisions. These are Clinic Nursing, Inspections and Standards, Mental Health Nursing, and Public Health Nursing. Their common function, to maintain and improve community health, has both legal and traditional bases.

For example, Inspections and Standards develops nursing standards for patient care in hospitals, nursing homes, and similar institutions licensed in the District. This Division also determines compliance with laws which affect nurs-



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ing care, offers consultation services to hospital and nursing home management, conducts training programs for nursing and patient care staffs, and seeks generally to improve the level of nursing care in the District.

Clinic Nursing is an essential part of the medical team which provides direct and indirect patient care in the Department's various clinics. These nurses also help manage the clinics, in an administrative sense, and perform health education services for patients, supervise clinic aides, and participate in certain kinds of clinical research. These nurses often have acquired special training in pediatrics, prenatal, geriatrics, and other fields of medical care.

Mental Health Nursing works with patients in their homes and in the Department's mental health centers. In addition to patient care they teach in this new and growing field, help define needs in community mental health, supervise aides and other workers, and provide consultative services.

Public Health Nursing, the largest of the Nursing Bureau groups, offers nursing services to ill and injured patients in the home, assists in patient rehabilitation, conducts health education programs for school children, works in vaccination

and other preventive programs, and is active in nurse teaching and training. This unit also takes an active part in epidemic investigations such as the recent smallpox incident and cases of food-borne illness.

The Department has specialized nursing consultants who are identified with major Public Health projects such as tuberculosis control, venereal disease control, rheumatic fever, and similar known problem areas. The Nursing Bureau also has active liaison with other official, non-official and voluntary health agencies in D.C.

In recent years, the services of Public Health nurses have been increased through assigning health aides to assist them, especially for some health care in the home and in other situations where highly developed nursing skills are not required. The Department presently has a group of trained home-care health aides, working under physician and nurse supervision in the care of elderly, indigent residents of the District who need varying degrees of care.

As useful as it was when set up in 1935, Public Health nursing in Washington has come far in the past 30 years in terms of professional growth and service to District residents.

MURRAY GRANT, M.D., D.P.H.
D. C. Director of Public Health

Report on Meeting of the President's Committee on Employment of the Handicapped*

THE PRESIDENT'S COMMITTEE on Employment of the Handicapped met in Washington, D. C. on April 29 and 30, 1965. The purpose was to exchange information and learn new developments and techniques in the field of rehabilitation. The emphasis this year was on employment of the severely disabled.

The Thursday morning session began with a welcome from Howard Russell, Chairman of the President's Committee. He pointed out the many accomplishments of the Committee in its 20 years' existence and the many goals still to be achieved in the hiring of the handicapped. Mr. Russell paid tribute to the late Major Moss who chaired this Committee for so many years.

Speaker of the House John McCormack was presented with a special award for his enthusiastic leadership in enacting legislation for the rehabilitation and appointment of the handicapped. Speaker McCormack, in responding, pledged his continued interest and effort in helping the handicapped to independence.

Nancy Dickerson of NBC-TV News then presented a "Tribute to Courage" to Roger W. Irving, the Handicapped American of the Year. Mr. Irving is a man 72 years of age who was forced by cancer of the larynx to give up a singing and selling career. He became proficient in esophageal speech and began to teach other laryngectomies. Mr. Irving is a self-employed consultant. His award, a plaque made by the students of the Institute of Crippled and Disabled in New York, was presented by the Honorable W. Willard Wirtz, Secretary of Labor, representing the President of the United States. He also presented prizes for the contest "Ability Counts" to 5 high school students.

Stephen Dohonos, the noted magazine illustrator of Famous Artist Schools, Westport, Connecticut, presented an original illustration to Mr. Russell. This art work will be used by the President's Committee in its poster campaign during the twentieth anniversary of National Employ the Physically Handicapped Week this fall.

Dr. Harold E. Yunker, Professor of Psychology at Hofstra University, Hempstead, New York, keyed the 2-day meeting with a speech on "America's Attitude Toward the Disabled; Progress and Prospects." In his speech Dr. Yunker

discussed the improvement of the public's attitude toward the disabled but emphasized that there is still a long way to go. Dr. Yunker pointed out that when he began to plan for his future while in high school he was interested in teaching. He was discouraged by those who felt he could not possibly make it. Dr. Yunker has cerebral palsy. His speech is slightly affected, his motion slightly exaggerated. Dr. Yunker persisted with his education and found he could function on campus. He found in addition that once his classmates recognized him as an individual, rather than a cripple, he was accepted. He finds this true today. When his students begin their class with him, they are not sure they wish to continue the year with Dr. Yunker. He encourages those who wish to change instructors to do so. He finds that by the end of the semester the students have completely overlooked his handicap and view him as just another instructor.

Dr. Yunker used this illustration to point out the importance of the American public learning to look at the individual rather than the handicap in order to know what a person can contribute. He pointed out that attitudes produce behavior and that attitudes are more important than the disability. The emphasis should be on what can be done rather than what cannot be done. He further stated that the attitude of the nondisabled toward the disabled reflects his prejudice. The people who are prejudiced toward minority groups are usually prejudiced toward the disabled.

In the afternoon several panels were conducted concurrently. Topics included Employment of the Mentally Retarded, Employment of the Mentally Restored, More Defense Business for Sheltered Workshops, Arts and Crafts, Publicity Techniques, Employment Problems in Heart, Cancer and Stroke, The Economic Act and the Handicapped, and Removing Architectural Barriers through State and Local Action. I attended the panel on The Economic Opportunity Act and the Handicapped. The discussants were key officials in the Office of Economic Opportunity, The Labor Department, and the Department of Health, Education, and Welfare. The Economic Act was developed to help people toward independence. The goal, according to the panel, is to open doors to the poor. The tools to be used for adults included a work experience program providing opportunity for training in fields where there is an employment market. In addition plans are under-

* EDITOR'S NOTE: DR. KENRICK represented the Medical Society of the District of Columbia at this meeting.

way for adult education programs to improve literary skills. Another project will be incentive programs in rural and migrant areas.

For the youth of the country the Job Corps has been developed and is now underway, providing residential centers for skill training and basic education. There is also a neighborhood youth program for preschoolers called "Operation Head Start" which will enable culturally deprived children between 4 and 6 to begin school on a level more comparable with other children. It is hoped that this program will become a means of detecting health problems among these children. Where such problems are found efforts will be made to correct them through local health facilities. Where handicaps are found, equipment and rehabilitation will be provided for the children. During the discussion which followed the panel it was thought that this program could be of much value in helping the disabled to find jobs and educational opportunities. Many of the Health and Welfare people plan to look into the Act further and see how it can best be utilized.

Those participating in the panel on employment problems of heart, cancer and stroke patients agreed that with the many improvements over the last 10 years the potential of such patients for rehabilitation and recovery is much greater. Industry's attitude toward the hiring of the disabled has changed with education, and policies have become more flexible. Mrs. Lanpher, one of the discussants, was a French teacher in a local high school for many years. She had taken a prolonged leave of absence following the surgical removal of her larynx due to cancer. She was very anxious to return to her profession, and with 2 years of determined speech effort found that she was able to teach again. She taught French for several more years before she retired. She is now very active in the Lost Chord Club of Washington, D. C.

In the discussion it was pointed out that there is general improvement in the employment picture for these people because the personnel manager has become more sophisticated in these areas and has developed a realistic attitude. Complementing him are a better informed industrial nurse, social worker, placement worker, and rehabilitation counsellor.

On Friday morning Mr. Gordon Freeman, Vice Chairman of the President's Committee, gave his report to the Nation and emphasized the following points. America's local employment offices placed 282,000 handicapped individuals

last year. The state and Federal programs of Vocational Rehabilitation rehabilitated 120,000 handicapped last year. In public relations both labor and management are campaigning for hiring the handicapped. A preliminary investigation has started on a national study to find out whether disabilities of handicapped workers pose "excessive cost risk" for employers and under what conditions. Architectural barriers are disappearing and 33 states have passed laws requiring that all buildings constructed with state funds be fully accessible to the handicapped. The Employer of the Year was Raytheon Company which has 1,500 handicapped workers out of 28,000 employees.

After Mr. Freeman's report there was a panel discussion on "Getting Your Message Across—Communicating with Special Groups." Emphasis was placed on the importance of getting the support of public opinion through proper planning and presentation. Miss Carter spoke on what motivates women. Her advice was to single out leadership in women's clubs and present a regular kit with an outline of the project, including a speech and printed material for members. Mr. Feldon spoke on what motivates youth. He said that the youth are interested in building the Great Society, as evidenced by their response to the Peace Corps. He ended by saying, "Adolescence is a search for something and somebody to be true to, and we can help their search." Mr. Solomon spoke on what motivates the employer. He stressed that there is still far too much bureaucracy, red tape, and delay on the part of agencies responsible for placing the handicapped in jobs. There should not be this delay when the employer calls for a worker.

Another panel considered "Attitudes Affecting the Employment of the Severely Disabled." The disabilities discussed included paraplegia, epilepsy, blindness, deafness, and cerebral palsy. The panelists stressed that the same standards of aptitude must be used as with any other group. If a worker cannot handle a job well within his limitations, frustration and failure will result.

The final speaker of the morning was Vice President Hubert Humphrey. He stated that we as a nation can accomplish anything we want. He went on further to say, "Any country that can put a man on the moon can certainly put a man on his feet."

MARGARET M. KENRICK, M.D.
*Vice Chairman, Committee on
Rehabilitation and Chronic Illness*

Letters to the Editor

Periodic Health Examinations

DR. PAUL R. WILNER'S MESSAGE entitled "Continuity of Patient Care" emphasizes a valid point with respect to the preferability of having the total care of patients supervised by one physician. As he suggests, the theoretical advantages of having the same physician do an individual's periodic health examination and any needed ongoing medical observation or treatment would seem appreciable.

To be realistic, however, certain further pertinent considerations on the subject merit recording.

Since the early 1920's organized medicine, in the form of the American Medical Association and component societies, has advocated periodic health examinations. Very considerable efforts have been made to persuade the public to seek them and to persuade practicing physicians to provide them. We must admit, however, that relatively little success was enjoyed as a result of these attempts. The educational goal sought is not as easily achieved as superficial considerations would suggest, either with respect to the public or the practicing physician. The latter is often fully occupied taking care of individuals known to require his therapy and either cannot or is not inclined to allot much time to the performance of periodic health maintenance examinations.

With respect to the public, even individuals entitled to such examinations, for example, those who have paid for them under a prepayment plan, usually show little inclination to seek or accept them. Many such medical practice groups have found it impossible to persuade more than 25 to 30 per cent of the people eligible for periodic examinations to accept them, even where there is no consideration of lack of confidentiality or interference with career aspirations.

Because of the resulting void over decades of time in spite of the finest intentions and the notably good logic involved, employers and others have chosen to provide periodic health maintenance examinations. Under proper circumstances high percentages of covered populations have accepted them and cooperated well (and often uninhibitedly) in their performance.

The results of periodic health examinations are admittedly often exaggerated, and their limitations often minimized. Nonetheless, when they are well performed, which involves time and corresponding expense—problems that have limited their growth in private practice—it is common experience that about half of the patients in whom significant new disease is discovered have no symptoms of it whatsoever. Accordingly, under ordinary circumstances these individuals would not be consulting their personal physicians.

Further, many of the positive and important findings at periodic examinations are based on the performance

of some study for which no clinical indication, as usually defined, exists. Such would remain undetected if the extent of study were to be limited to "a physical examination by one's own physician coupled with an adequate history and indicated laboratory tests" as prescribed by Dr. Wilner. In some of the cases in which significant disease is discovered, though obviously not in all, the likelihood of treatment being successful is enhanced by the earlier diagnosis.

These considerations, of course, are not in significant conflict with Dr. Wilner's proposals. But, as he suggests in his own notes, a regularly increasing percentage of the public is being offered these examinations and educated with respect to their value. This was not being accomplished to any appreciable degree when it remained quite exclusively a matter between the individual and his personal physician. If patients could be taught to go to their personal physicians for periodic examinations, if their personal physicians were interested in providing them and the facilities for their provision were reasonably convenient and practical, it would be a wonderful prospect, indeed. Unfortunately, many problems remain to be resolved before there is great likelihood of this becoming practical on a very widespread basis. In 1965 a discouraging percentage of patients who consult their personal physicians for a review of their health status find it difficult to purchase more than a perfunctory, relatively disinterested and superficial examination.

I thoroughly agree with Dr. Wilner's suggestion that

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the findings on periodic examinations should be made available to the personal physicians of the individuals examined. I further thoroughly subscribe to the desirability of sustained educational efforts on the part of those doing regular periodic examinations to urge patients to have a personal physician who is familiar with them and to whom they can turn for needed observation and treatment between periodic examinations.

In summary, what I am suggesting is not that we resign ourselves to the fact that the personal physician cannot do regular periodic examinations in addition to continuing or episodic medical care, but that we face realistically that in spite of many organized efforts to accomplish this goal, little progress, indeed, was made until the groups which Dr. Wilner seems to deprecate to some extent took an active and positive approach to the program.

Sincerely,
N. J. ROBERTS, M.D.
*Chairman, Steering Committee,
Periodic Health Examination,
Coöperative Research Program,
University of Pennsylvania*

DEAR DR. ROBERTS:

Thank you very much for your very perceptive answer to my President's Page entitled "Continuity of Patient Care," published in the MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA, May 1965.

The Medical Society of the District of Columbia was founded in 1817, and the ANNALS is one of the 41 State Medical Society publications. The President's Page is written primarily for local consumption and may be based upon indigenous problems. A practicing physician in the Washington area is increasingly subjected to the results of executive physical examinations with insufficient background data to treat the patient when acutely ill at home or in his office. This is what we mean by lack of continuity of care.

Your comments regarding the reluctance of family physicians to perform routine annual physical examinations and the reluctance of patients to seek such examinations are respected but not completely shared by many observers. Constant education directed toward both doctors and the public has brought an increased awareness of the value of periodic physical examinations

on the part of both. It is my belief that the doctors of today are increasingly well qualified to fulfill the standards of the American Society of Internal Medicine's history and physical examination forms. Under such standards it would be best for the patient to be examined by his own physician.

We do not deprecate groups such as yours that perform a fine Periodic Health Research Program. Yours is to be commended and copied. Our confidence, however, is not so great in expanding Federal agency medical activities.

Your letter was not only stimulating, but provocative. It suggests that the many facilities involved in periodic health examinations should educate each other as to the requirements of a proper examination. Perhaps an employee, whether he be an executive or not, could bring a required form to be completely filled in by his own physician, or a patient might alternate his annual examinations between his family doctor and the clinic-oriented examination. These suggestions might overcome some of your and our objections.

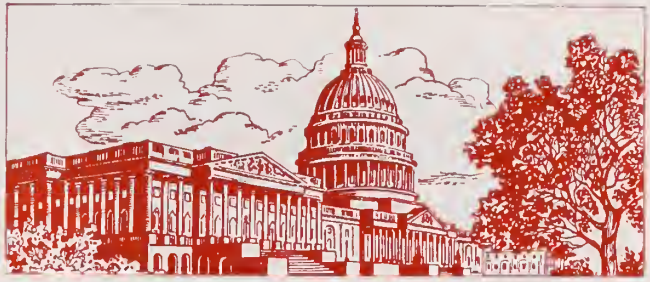
It should be understood that communication with the family physician be a necessary link in any type of examination. This is for the benefit of the patient. Our philosophy, as yours, has always been: Do what is best for the patient, not the doctor, nurse, clinic or hospital. If a patient has a doctor who has the ability, facilities and desire to perform a quality annual examination he should have the privilege of consulting his doctor.

Another aspect of our discussion affects our local situation but has nothing to do with the value of or quality of routine examinations for executives. President Johnson's order regarding on-the-job health services to Federal employees directly affects the patient-doctor relationship in Washington. His action was followed by a directive sent to all agencies by the Budget Bureau, detailing the steps to be taken. According to the directive, the various government units will set up health facilities and have professional personnel treat employees for on-the-job injuries, periodic physical examinations which the agency deems necessary, administer treatments and medications which are necessary on the job for an employee in ill health (prescribed in writing by an employee's personal physician), and perform preventive services such as providing health education to employees, providing specific disease screening examinations and immunizations, and appraising and correcting health and working condition hazards in an agency. Preemployment examinations also will be given.

Therefore, what is left for the practitioner? House-calls, night calls, and weekend calls? Does the patient benefit?

It is apparent that there are 2 sides to this coin and communications such as ours should lead only to the improvement of health care for our patients.

Sincerely,
PAUL R. WILNER, M.D.
*President, The Medical Society of the
District of Columbia*



NEWS & PERSONALS

Summary of Executive Board Actions

The June meeting of the **Executive Board of the Medical Society of the District of Columbia** was held, June 28, at 7 p.m. in the Medical Society's building. Present were Duane C. Richtmeyer, Chairman, C. Willard Camalier, Jr., Karl C. Corley, Darrell C. Crain, J. Spencer Dryden, Raymond T. Holden, Edward W. Nicklas, Paul R. Wilner, and Mr. Fred Trust, Acting Secretary. Also present was Mr. Warren Magee, Legal Counsel.

Committee Meetings: The following meetings were listed by the Secretary as having been held since the Board last met:

- May 18 Committee on Medicolegal Problems
- 19 House and Building Fund Subcommittee
- 20 Committee on Smoking and Health
- 25 Liaison Committee with Medical Schools and Hospitals
- 25 Ad Hoc Committee on Medicare
- 26 Liaison Committee with the Clergy
- 26 Traffic Committee
- 27 Committee on Smoking and Health
- 27 Committee on Medical Aspects of Sports and Physical Fitness
- 27 Obstetrical Board
- 28 Committee on Constitution and By-laws
- 31 Committee on Mental Health
- June 1 Committee on Alcoholism
- 1 Committee on Public Information and Education
- 2 Committee on Medical Ethics and Professional Conduct
- 2 House and Building Fund Subcommittee
- 4 Fee Review Committee
- 7 Committee on Mental Health (special meeting)
- 8 Grievance Committee
- 9 Board of Credentials
- 16 Committee on Environmental Health
- 16 House and Building Fund Subcommittee
- 16 Committee on Constitution and By-laws

17 Liaison Committee with Public Health Department

17 Joint meeting on Alcoholism and Traffic

18 Relative Value Study Committee

Board of Credentials: The Executive Board approved for membership the following applicants recommended by the Board of Credentials:

Active Members

Alfred Roosevelt Henderson, 3201 Wisconsin Avenue, N.W.

Milorad J. Jevtich, 1835 Eye Street, N.W.

Eugene Vance Jobe, 1 Farragut Square South

Stewart Jennings Johnson, 1500 T Street, N.W.

Han-Chih Tang, Saint Elizabeths Hospital

Associate Members

Jane S. Lin-Fu, 300 Independence Avenue, S.W.

Eduardo Oliveira, Doctors Hospital

Jose R. Puig, Children's Hospital

Toshi Tsurumaki, 1826 Metzert Road, Adelphi, Md.

William Griffith Workman, 5221-42nd Street, N.W.

Transfers

Active to Associate: Howard P. Parker

Resident-Intern to Active: George Dudas

Resident-Intern to Associate: Geraldine W. Paul

Reinstatements

Active: John B. Johnson and Ernest Kopstein

Resignations

Active: Modesto G. Criscitiello

Associate: Merlin L. Brubaker

Contract Renewal: Renewal of the contract of the Executive Director was approved.

Settlement of M Street Property: Dr. Wilner, President of the Society, was authorized to sign all papers necessary to complete the sale of the property at 1710-1718 M Street, Northwest

on July 15, 1965 in accordance with the agreement previously arranged by the Executive Board.

Health Foundation of D.C.: Mr. Magee, the Society's attorney, was authorized to proceed at once to seek to have the Health Foundation of the District of Columbia placed in a status which would permit donations to be income tax-deductible.

Casualty Hospital Project: Approved the recommendation of the Committee on Liaison with Medical Schools and Hospitals that Casualty Hospital seek Hill-Burton matching funds.

Interagency Council on Smoking: Approved recommendations made by the Committee on Smoking and Health concerning an Interagency Council on Smoking to be established through a Public Health Service grant at the request of the D. C. Department of Public Health.

Committee on Medical Ethics and Professional Conduct: Reviewed in detail a report of this Committee concerning various policy statements, approving the report with several suggestions and authorizing the Committee to prepare final policy statements on various items.

Status of St. Elizabeths Hospital: On the recommendation of the Committee on Mental Health the Executive Board approved the following statement: "...that the Medical Society officially inform the Public Health Advisory Council of the District of Columbia as follows: Before an opinion and recommendation may be made regarding any proposed change of control of St. Elizabeths Hospital, the Medical Society desires additional information to determine whether or not any change in control would be warranted. Further, with the information available to the Committee at this time, the Medical Society can see no logical basis for any such change."

Miscellaneous Business: Harry A. Horstman's appointment to the Committee on Medical Aspects of Sports and Physical Fitness was approved.

Naomi M. Kanof was named the Society's official representative to the Citizens' Council for a Clean Potomac.

The Executive Board approved the reorganized Obstetrical Board for a 3-year period and authorized the use of the facilities of the Medical Society for its meetings.

A request from Louis K. Alpert in regard to a proposed postgraduate course of the American Diabetes Association was reviewed and approved with the suggestion that this be held in the new Society headquarters early in 1966.

Dr. Wilner reported on the very excellent

Speakers Seminar sponsored by Smith, Kline and French Laboratories and was authorized to express the appreciation of the Society for this program and the hope that it might be repeated again in the very near future.

Paul B. Cornely, or a member selected by him, was authorized to represent the Society at the AMA's National Symposium on Venereal Disease in Chicago on November 20.

The President read a letter from Herbert P. Ramsey informing the Society of his resignation from the Advisory Committee to the Health Facilities Planning Council. It was agreed to consider a replacement at the next meeting.

The President reviewed the problem concerning emergency parking privileges and the steps being taken to solve this.

The meeting adjourned at 9:30 p.m.

Summary of July 26 Meeting

The Executive Board held its next dinner meeting in the Society's building, July 26, 1965. Present were Duane C. Richtmeyer, Chairman, C. Willard Camalier, Jr., Robert J. Coffey, Karl C. Corley, Darrell C. Crain, J. Spencer Dryden, Raymond T. Holden, Kenneth L. McCoy, Edward W. Nicklas, Paul R. Wilner, and Mr. George Cooley, Secretary. Also present was Mr. Lou Brott, public relations representative. The Chairman called the meeting to order at 7:15 p.m.

Committee Meetings: The following meetings were listed by the Secretary as having been held since the Board last met:

- June 29 Committee on Rehabilitation and Chronic Illness
- 29 Committee on Occupational Health
- 30 Committee on Motion Pictures (Scientific Assembly Program)
- July 2 Scientific Assembly Chairmen Luncheon
- 6 Ad Hoc Committee on Medicare
- 8 Traffic Committee
- 9 Fee Review Committee
- 14 Board of Credentials
- 14 Committee on Medical Ethics and Professional Conduct
- 16 Committee on Physician Placement
- 21 Committee on Public Policy and Legislation
- 22 Committee on Medical Aspects of Sports and Physical Fitness
- 23 Committee on Scientific Exhibits (SA Program)

Board of Credentials: The Executive Board approved the following recommendations of the Board of Credentials:

Active Members

John W. Barrett, 1150 Connecticut Avenue, N.W.
 Robert J. Brown III, 2260 Sixth Street, N.W.
 Donald Goldberg, 5225 Connecticut Avenue, N.W.
 Ernest L. Hopkins, Freedmen's Hospital
 Leroy A. Jackson, Jr., 707-A Kenyon Street, N.W.
 Richard M. Schisgall, 1800 Eye Street, N.W.
 Elias J. Umali, 4200 Wheeler Road, S.E.
 Robert S. Waldman, 1250 Connecticut Avenue, N.W.
 Richard M. Kaufman, 1712 Eye Street, N.W.

Associate Members

Charles R. Hayman, D.C. Department of Public Health
 Lutgardo G. Panlilio, Children's Hospital
 Louis Wener, 6480 New Hampshire Avenue, N.W.

Transfers

Resident-Intern to Associate: Edward Harvey Weiss
Active to Special: Charles J. Demas

Reinstatement

Associate: Ivy Pelzman

Resignations

Active: Edward H. Chappelle
Associate: David E. Price and John P. Utz

The Board postponed the requests of Neel J. Price and Howard P. Treichler for transfer from Active to Associate membership pending notification of Active membership in Virginia; also postponed was the request of Howard G. McQuarrie for transfer from Resident-Intern to Associate membership in order to determine whether he is holding Active membership elsewhere.

The request of Francis Threadgill for Special membership status was disapproved.

The Board approved a recommendation of the Board of Credentials that a Society member be notified by registered letter before he is dropped for nonpayment of dues.

Finance Committee: The report on Income and Expense for the first 6 months of 1965 was approved.

Dr. Wilner reported on details of completing the sale of the present Society property. Consideration of financing the new headquarters building was postponed pending completion of financial data.

Voted in favor of the recommendation of this Committee that underwriting a Society newsletter by a pharmaceutical company or other group is acceptable and that credit be given for such financial assistance by a proper byline or note to that effect.

It was voted to retain membership in the Washington Convention and Visitors Bureau.



DR. JOHN R. PATE, the new President of Civitan International, and Mrs. Pate (known professionally as Dr. Alice Drew Chenoweth) were given an ovation following his installation to office at the Sheraton-Park Hotel, June 30.

Printing the revised Relative Value Schedule for distribution to the membership was approved.

District of Columbia Political Action Committee: The Secretary reported on the proposed Constitution and By-laws of this Committee.

Committee on Public Information and Education: Mr. Brott will be retained for the remainder of 1965 as a public relations consultant; various items and activities now being handled by him were reviewed.

Appointments: The following appointees of President Wilner were approved: Charles D. Shields, to replace Herbert P. Ramsey on the Medical Advisory Committee to the Health Facilities Planning Council.

Jonathan M. Williams, Chairman, Josephine Renshaw, Samuel Desoff, Earl H. Mitchell, and Harry Zehner, Sr. to serve on the Liaison Committee with the D.C. Department of Motor Vehicles.

Maurice Mensh, representative to the Dairy Council.

Allan B. Coleman, Chairman, Philip L. Calcano, Roland B. Scott, Hugh G. Clark, William A. Howard, Jack Kleh, Robert H. Parrott, Edwin P. Parker, and Blanch Bourne, *ex officio*, members of the Liaison Committee with the United Planning Organization.

Francis D. Chucker, to replace Clifton R. Gruver as the Society's representative on the Medical-Dental Research Bureau.



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The following members were designated the Society's official representatives at a number of future AMA meetings: Dr. Coffey and Warren D. Brill, PR Conference, August 19-20; Dr. Coffey, Conference of Presidents, August 20-21; Harold M. Hobart, Conference on Physicians and Schools, September 23-25; Paul Jaquet and William H. Cooper, National Congress on Medical Ethics and Professionalism, October 2-3; and John A. Kenney, National Symposium on VD Control, November 20.

The meeting was adjourned at 9:35 p.m.

Meetings

The 16th Annual Convention of the American Association of Medical Clinics will convene at the Shoreham Hotel, Washington, September 29 to October 1. President F. Gregg Thompson Jr., M.D., of St. Joseph, Mo., will preside. Dr. Joseph B. Davis, of Marion, Indiana, will be installed as the sixteenth President of the Association.

The luncheon speaker on Thursday, September 30, will be Dr. Stuart M. Sessions, Deputy Director of the National Institutes of Health, who will discuss the policies and programs of NIH. On Friday the luncheon speaker will be Dr. Aaron W. Christensen, Assistant Surgeon General. His topic will be "The Role of the Public Health Service Under New Health Legislation." His speech will be followed by a panel discussion on health care for the aged in which the Honorable Robert M. Ball, Commissioner of Social Security, will participate.

Other guest speakers of interest will include Attorney John H. Cardon, of Washington, who will discuss tax problems associated with professional groups, and Mr. Meyer Melnikoff, Vice President of the Prudential Insurance Company, who will speak on retirement programs for professional people.

Dr. Edwin P. Jordan, Executive Director of the Association, announces that 3 workshops will be held during the Convention for discussion of internal clinic problems.

The George Washington University School of Medicine will conduct a **Symposium on Suicide: Its Nature, Causes and Prevention** on October 14 in Lisner Auditorium. It will be one of the few major scientific meetings ever devoted exclusively to this national health problem. The program will explore many facets of the subject, in-

cluding suicide's cultural role, social causations, statistical importance, psychodynamics, treatment and prevention. The audience will include physicians and other individuals with a professional or scholarly concern with suicide.

Georgetown University School of Medicine is sponsoring a **Caribbean Cruise Seminar**, October 28 to November 12, aboard the Swedish-American liner *Gripsholm*. The Seminar faculty will include Drs. Sol Katz, Frank A. Finnerty, John J. Canary, Joseph W. Peabody, Jr., and Desmond O'Doherty.

An enjoyable West Indies cruise for both husband and wife can be combined with an instructive postgraduate program on selected topics in internal medicine, neurology, and thoracic surgery. The Seminar is accredited by the American Academy of General Practice.

Detailed information may be secured by addressing Dr. Katz, Chief of Medicine, Veterans Administration Hospital, 50 Irving Street, N.W., Washington, D.C. 20422, or Mr. L. D. Uhrig, Office of the Dean, Georgetown University School of Medicine, Washington, D.C. 20007.

The American Medical Association will sponsor 2 meetings of wide interest during the month of October, both to be held at the Drake Hotel in Chicago. On October 2 and 3 the first **National Congress on Medical Ethics and Professionalism** will convene. Former Congressman Walter H. Judd, M.D., will be a luncheon speaker. He will outline accomplishments and deficiencies in the medical profession's standards for ethical deportment. The opening session of the Congress will feature Dr. James Z. Appel, President of the AMA, who will speak on "Medicine—A Profession or a Business?"

Physicians interested in attending this Congress are advised to make reservations early. They should write to Dr. James H. Berge, Chairman, Judicial Council of the AMA, 535 North Dearborn Street, Chicago, Illinois 60610.

The Sixteenth National Conference on Disaster Medical Care will convene at the Drake Hotel on October 30 and 31. Three symposia are scheduled, the first on Care of the Traumatized Patient, the second on Disaster Communications, and the third on Disaster Planning in Industry. Those planning to attend should write to the Secretary of the Committee on Disaster Medical Care of the AMA. A \$10.00 registration fee will be payable at the time of registration.



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The Seventh International Congress of Gerontology will convene in Vienna, June 26-July 2, 1966, under the auspices of the Austrian Society for Geriatrics. Dr. W. Doberauer, Associate Professor of the Vienna University, will be President of the Congress.

Congress fees for participants are \$30.00 each if paid before December 31, and \$40.00 if paid after December 31, 1965. Information on registration and submission of manuscripts and abstracts may be secured from Mrs. Ingrid Andersons, Seventh International Congress of Gerontology, Wiener Medizinische Akademie, Alser Strasse 4, Vienna IX, Austria. Inquiries regarding accommodations and social activities may be addressed to Miss Edith Schindlbacher, Alser Strasse 4, Vienna IX, Austria.

General News

Dr. John F. Finnegan was elected **President of the Washington Heart Association** at its Annual Meeting, June 28, at the Mayflower Hotel. He succeeds Dr. Edward D. Freis.

Dr. Finnegan has been in the private practice of internal medicine in Washington since his graduation from Georgetown University School of Medicine in 1931. He serves as Chairman of the Section on Clinical Cardiology at Providence Hospital, and has been an active member of the Board of Directors of the Washington Heart Association since 1957.

Other officers elected were: Dr. Jack Kleh, President-elect; Dr. Benjamin Manchester, Vice President; Mrs. Bernard J. Walsh, Secretary; Mr. John E. Sumpter, Treasurer; and Mr. Kenneth Birgfeld, Assistant Treasurer. Among those elected to the Board of Directors for 2-year terms were Dr. Frank A. Finnerty, Jr. and Dr. Rashid A. Massumi. Re-elected to serve for 2-year terms were Drs. Freis, W. Proctor Harvey, John B. Johnson, Lawrence S. Lilienfield, and Howard C. Pierpont.

Several physicians received awards for special service. They were: Dr. Harvey, President of the Association for 1963-64; Dr. Freis, retiring President; and Dr. Clayton B. Ethridge, representative of the Heart Association on the local Council of the Federal Service Campaign for the National Health Agencies and its Chairman for 4 years.



DR. JOHN F. FINNEGAN (right), newly elected President of the Washington Heart Association, receives the gavel of his office from Mr. Kenneth Birgfeld, installing officer, at the Annual Meeting of the Association, June 28.

The Urologic X-ray Conferences at Georgetown University School of Medicine will be resumed this fall. From October through April they will be held the last Tuesday of each month at 8:00 p.m. in Room 102 of the Georgetown University Medical-Dental Building. Dr. William P. Herbst, Emeritus Clinical Professor of Urology at Georgetown, will conduct the conferences as before.

The Infectious Disease Clinic was inaugurated at the Freedmen's Hospital on May 25. Under the direction of Dr. Margaret E. Grigsby, Associate Professor of Medicine at Howard University College of Medicine, the Clinic meets regularly on Tuesdays at 1:00 p.m. in the Clinical Building to diagnose and treat all infectious diseases, including tropical diseases.

Officers of the **Washington, D.C. Dermatological Society** for 1965-66 are:

Dr. C. Wendell Freeman, *President*; Lt. Colonel Louis E. Harman, *Vice President*; and Dr. William G. Ballinger, *Secretary-Treasurer*.

Announcement of 3 new publications for the general public have come into the Medical Society's offices. The first, a publication of the

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Public Health Service, is **"Cancer of the Colon and Rectum,"** the eighth in a series of 10 pamphlets on cancer of different body sites prepared by the Cancer Institute. Single copies are available without charge from the Public Health Service, Washington, D.C. 20201. In quantity lots they may be purchased from the Superintendent of Documents, U.S. Government Printing Office, at 5 cents a copy, or \$2.75 for 100 copies.

The intent of a new bulletin, *The Asthmatic Patient*, which is being prepared by the Asthma Research Foundation, Inc., is to supplement and not supplant professional medical care. It will be published twice each month, with the first issue scheduled for September. Subscriptions are \$6 per year. A series of free sample issues will be sent to physicians upon request to Dr. Ethan Allan Brown, Director of the Foundation, 75 Bay State Road, Boston, Mass. 02215.

A free pamphlet with authoritative information and advice was offered to the public by the Allergy Foundation of America during the Ninth Annual National Allergy Month, August 15-September 15. Entitled **"Asthma, Hay Fever and Other Allergies,"** copies may be obtained by writing to the Foundation at 801 Second Avenue, New York, N.Y. 10017.

Mr. Robert B. Throckmorton, General Counsel of the American Medical Association, has submitted his resignation. He has served as General Counsel since July 1, 1963 and has directed the AMA Law, Legislation, Ethics and Investigation Departments. He will continue to serve in a part-time capacity for the remainder of the year as special legal consultant to the AMA Executive Vice President, Dr. F. J. L. Blasingame. Mr. Throckmorton plans to return to Des Moines, Iowa, where he was in private law practice before joining the AMA.

Dr. Raymond L. White, who has served since September 1961 as **Director of AMA's Socio-Economic Activities,** requested a change of assignment because of a health problem and has been named to a newly created position, consultant on socioeconomic activities to Dr. Blasingame. Dr. Charles C. Edwards, who has been Dr. White's Assistant Director, will serve as Acting Director of the Division of Socio-Economic Activities.

President Johnson has appointed **John W. Gardner, Ph.D. as Secretary of the Department of Health, Education, and Welfare,** succeeding Mr. Anthony Celebrezze. The new Secretary has been President of the Carnegie Foundation for the Advancement of Education and headed the President's Special Task Force on Education in 1964.

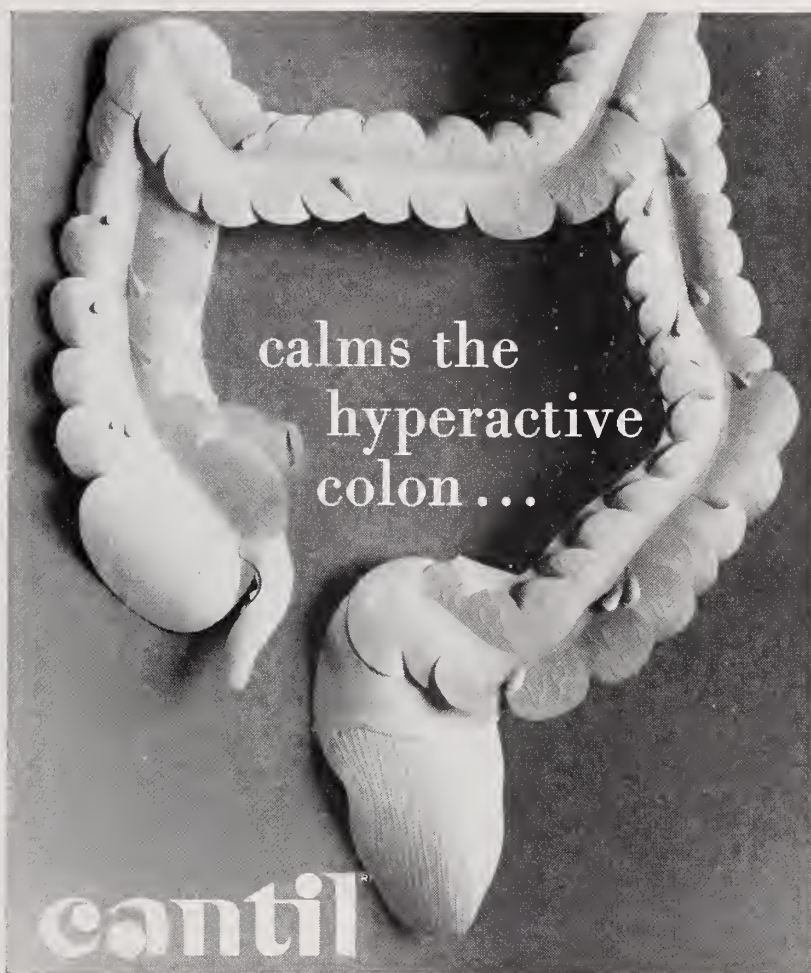
Dr. Philip Randolph Lee, an official of the Agency for International Development, has been appointed to the newly created post of **Deputy Assistant Secretary of HEW.** Dr. Lee is an alumnus of Stanford University School of Medicine.

Dr. William H. Stewart has been named **Director of the National Heart Institute,** succeeding Dr. Ralph E. Knutti, who has retired. Prior to his present appointment, Dr. Stewart served as Assistant to the Special Assistant to the Secretary (Health and Medical Affairs) of the Department of HEW. He was formerly Assistant Director of NHL.

Dr. Donald Harting is the new **Director of the National Institute of Child Health and Human Development.** He was Assistant Director of this Institute in 1963-64 and became Acting Director last October, succeeding Dr. Robert A. Aldrich.

The new **President of the D.C. Tuberculosis Association is Dr. K. Albert Harden,** Professor of Medicine at Howard University College of Medicine. He was elected President of the Association at a meeting of the Board of Directors, May 12.

Correction: Dr. Arthur P. Hustead should have been reported as **Secretary-Treasurer of the Metropolitan Medicolegal Society** in the July issue of the *MEDICAL ANNALS* instead of Dr. William T. Spence. Physicians wishing to join the Society may do so by calling Dr. Hustead at Sterling 3-3425.



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Cantil (mepenzolate bromide) works in the colon. In irritable colon, spastic colon, ulcerative colitis and other functional and organic colonic disorders, it acts to:

- control diarrhea/constipation
- relieve spasm, cramping, bloating
- make patients more comfortable

with little effect on stomach, bladder or other viscera.

"In 40 of 44 cases of irritable or spastic colon, Cantil [mepenzolate bromide] or Cantil with Phenobarbital reduced or abolished abdominal pain, diarrhea and distention and promoted restoration of normal bowel function . . . Cantil [mepenzolate bromide] proved to be singularly free of anticholinergic side-effects. Blurring of vision or dryness of the mouth were occasionally seen and were usually managed with a reduction in dosage. Urinary retention, noted in two cases was eliminated in one by reducing dosage."¹

IN BRIEF:

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Dryness of the mouth or blurring of vision may occur but it is usually mild and transitory. Urinary retention is rare. Caution should be observed in prostatic hypertrophy—withhold in glaucoma. Cantil with Phenobarbital is contraindicated in patients sensitive to phenobarbital.

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1-Riese, J.A.: Amer. J. Gastroent. 28:541 (Nov.) 1957



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Personals

Dr. Sidney L. Werkman, Associate Clinical Professor of Psychiatry at George Washington University School of Medicine, will be in charge of a program at Children's Hospital and Hillcrest Children's Center for the development of a training program in adolescent psychiatry. The program, which is made possible through a \$226,000 grant over a 5-year period from the Public Health Service, will train psychiatrists and pediatricians in the diagnosis and treatment of teenagers and young adults. The new Division will also continue its research into the causes of emotional disorders in this age group.

Dr. William P. Herbst, on July 16, was appointed a member of the Committee on Urology, Division of Medical Sciences, National Research Council of the National Academy of Sciences to serve for 1 year. Surgeon General Luther Terry has appointed him to the Council of Metabolism and Arthritis of the National Institutes of Health for a 5-year period.

Dr. Raymond Feldman, an Associate member of the D.C. Medical Society, has been appointed Deputy Director of the National Institute of Mental Health. Dr. Feldman has been with NIMH since 1957. He was named Chief of the Training Branch in 1959 and in 1963 became Associate Director for Extramural Programs.

Dr. Ernest W. Lowe, Chief of Obstetrics and Gynecology at D.C. General Hospital, will be one of the alumni speakers during the 3-day Inaugural Scientific Program of the new Ancker Hospital (Saint Paul-Ramsey Hospital) in St. Paul, Minn., November 11, 12 and 13. The principal address will be given by Dr. Martin Cummings, Director of the National Library of Medicine.

Dr. James M. Moss, an Associate member of the D.C. Medical Society, was installed as President of the University of Virginia Medical Alumni Association during Medical Alumni Day in Charlottesville, June 4. More than 500 medical alumni and their guests attended the meeting, some coming from as far away as Alaska, Washington, Oregon and California.

Major General Oliver K. Niess, of Colorado Springs, Colo., former Surgeon General of the U.S. Air Force, was elected President of the American College of Chest Physicians during its Annual Meeting in New York, June 17-20. General Niess is an Honorary member of the D.C. Medical Society.

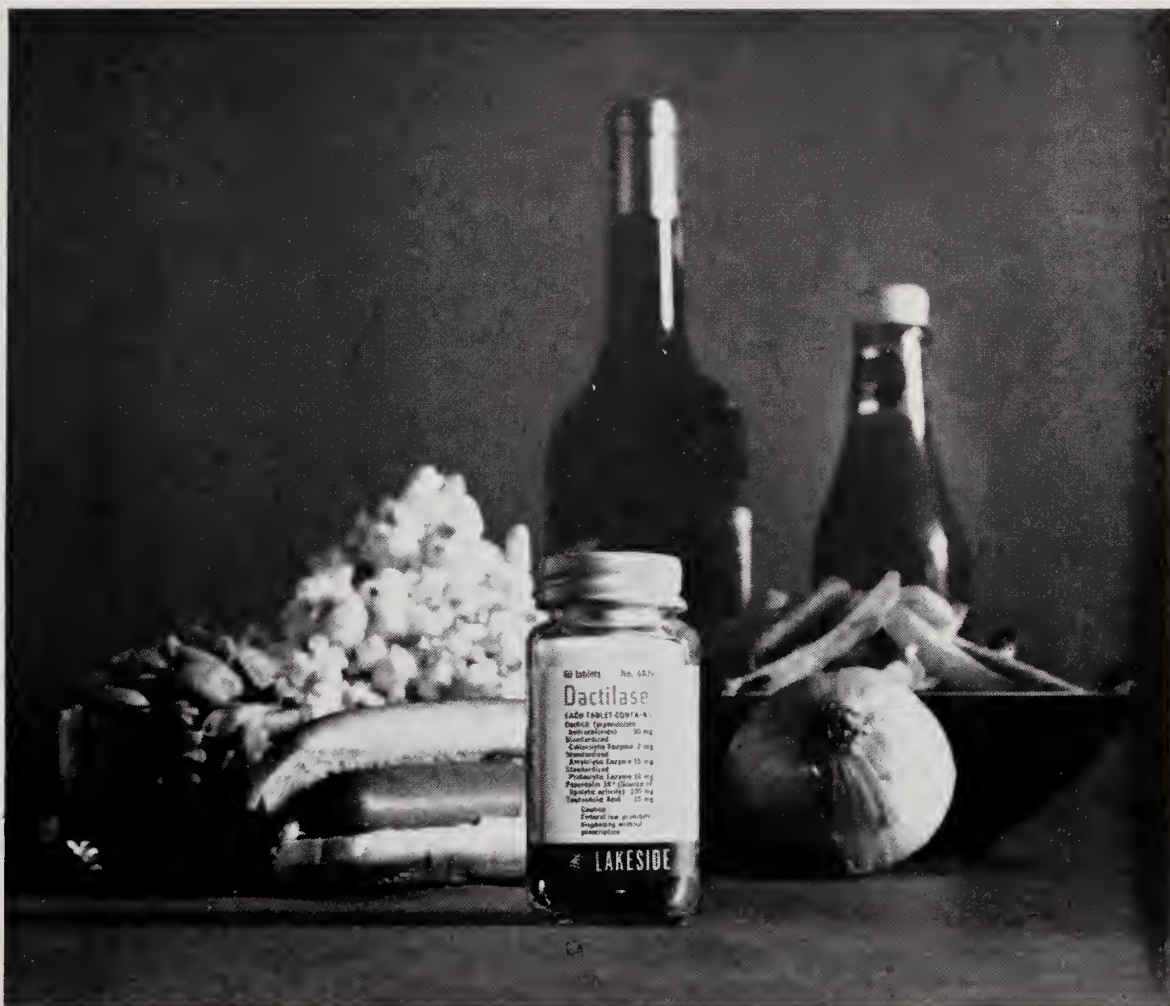
Dr. C. Richard A. Gilbert, gynecologist and author, also one of the world's big game bow hunters, left for Africa, July 31, to test his skill and fortune against the big 4 (elephant, lion, Cape buffalo, and leopard) with the bow and arrow. He



DR. GILBERT, big game bow hunter, exhibits the caribou which he took with a single arrow from a 100 lb. bow.

is especially anxious to kill a lion with this weapon because this has not yet been accomplished. He has successfully hunted most of the major game animals (black bear, Kodiak bear, moose and caribou) of the North American Continent with the bow and arrow. The actual purpose of his trip, however, is medical research, and any animal which is killed will be used for this purpose. The information gathered from this trip will also serve as the basis for another book.

A posthumous award was made to the late **Dr. Grace D. L. Stone**, who died, June 5, 1964, by the Association for Physical Health, Education and Research, April 24, in Annapolis, Maryland. The award cited her work as school health coordinator for the D.C. Department of Public Health and her interest in and devotion to improved health services for school children. Mr. Wallace Stone, her son, accepted the award on behalf of the family.



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lytic enzyme, 15 mg.; Standardized proteolytic enzyme, 10 mg.; Pancreatin 3X** (source of lipolytic activity), 100 mg.; Taurocholic acid, 15 mg.

*Need in human nutrition not established. **As acid resistant granules equivalent in activity to 300 mg. Pancreatin N.F.

Side Effects and Contraindications: DACTILASE is almost entirely free of side effects. However, it should be withheld in glaucoma and in jaundice due to complete biliary obstruction.

Administration and Dosage: One tablet with, or immediately following each meal. Tablets should be swallowed whole.

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Obituaries

Joseph S. Lawrence, A.B., A.M., M.D.

(1877-1965)

REPRESENTING the American Medical Association in Washington during the turbulent 1940's was no sinecure. The Administration was determined that Congress pass a compulsory health insurance bill and heavy pressure was applied to legislators. In opening its Washington office at



JOSEPH S. LAWRENCE, M.D.

that time, the AMA could not have made a better choice for its first Director than Dr. Joseph S. Lawrence. He had had long experience in the legislative field in New York State, but more important was the kind of a man he was. Outgoing, friendly and patient, he counted among his friends "on the Hill" both those who were in favor of the AMA's policies and those bitterly opposed. All liked "Joe" and respected him even though they disagreed with the views he espoused. Significantly, the Administration's health insurance legislation was defeated, but Dr. Lawrence's friendly relationships continued.

Dr. Lawrence was an "idea man" and enjoyed exploring all sides of questions in a homespun

manner. Legislators liked him for this approach. Among the friends he made were statesmen of such divergent views as Senator Robert Taft of Ohio and Senator James E. Murray of Montana. Both recognized his sincerity and that although he had strong convictions, he did not have a closed mind.

Dr. Lawrence was born in Washingtonboro, Pennsylvania, June 25, 1877. He attended schools in that area until the turn of the century, when he enrolled in Franklin Marshall College. There he received his A.B. degree in 1904 and his A.M. in 1912. He was 35 years old when he entered Johns Hopkins Medical School, from which he received his M.D. degree in 1916.

In 1916 he was one of the first American physicians to go to France, and according to a biographer, "Many a World War veteran can thank his stars that he did, for he helped introduce the Carrell-Dakin method of treating wounds by irrigating them with solutions and keeping track of the bacteria count before closing wounds." It was here he became bacteriologist at the American Hospital at Neuilly, France, later to become Base Hospital Number 1.

Upon his return to the United States in 1917, he was appointed bacteriologist and pathologist for the New York State Department of Health. Late in 1918 he was promoted to Chief of the Division of Venereal Diseases, a post he held until 1924.

His first association with organized medicine was in 1924 when he became Executive Officer of the New York State Medical Society. He held this position until 1944 when he came to Washington to become Director of the Washington office of the American Medical Association. He retired in 1952 at the age of 75.

One couldn't say that Dr. Lawrence was exactly happy in his retirement because he was still vigorous and became restless without challenging duties. Nevertheless, he was active on committees of the Medical Society of the District of Columbia, of which he was an active member. He was often called upon for advice in organizational matters.

Dr. Lawrence was a member of the American Medical Association, Southern Medical Association, Association of Military Surgeons of U.S., American Public Health Association, American Social Hygiene Association, and a Fellow of the Royal Institute of Public Health of England. He was also a Mason, a former Rotarian, and a member of the Torch and University Clubs of Washington.

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Always active in his church, he was a member of the Sixth United Presbyterian Church of Washington.

He is survived by his wife, Mrs. Roberta V. Lawrence, a daughter, Roberta Jane, and a son, Joseph L. Lawrence.

Together with his many other friends, I shall miss "Joe." I did not see as much of him in recent years as I did formerly, but every so often he had an "idea" and I would receive a telephone call. I visited his home only 3 weeks before his death and he had many thoughts on what should be done in the current medical situation. He died on July 18, 1965 at 88, full of years with many accomplishments to his credit. The world would be much better off with more men like Dr. Lawrence.

THEODORE WIPRUD

Robert Paul Odenwald, B.S., M.D.

(1899-1965)

DR. ROBERT P. ODENWALD, well known psychiatrist and author, died, July 17, 1965, at his home, 3701 Livingston Street, N.W. He had practiced psychiatry for more than 40 years and had been in private practice since 1953.

Dr. Odenwald, a native of Karlsruhe, Germany, was born, June 25, 1899. He received his Bachelor's degree from the University of Heidelberg in 1920 and his medical degree from the University of Frankfurt in 1923. From 1924 to 1930 he studied at the University of Berlin, where he received postgraduate training in neuropsychiatry.

Six years later he came to the United States. From 1938 to 1948 he was Chief Neuropsychiatrist at the Good Samaritan Hospital in Suffern, New York, except for the years, 1943 to 1946, when he served, with the commission of Major, in the Medical Corps of the United States Army.

He was on the staff of Catholic University of America as Assistant Professor of Psychiatry and Director of the Child Center from 1948 to 1953.

A prolific writer, he is credited with more than 150 magazine articles. He was the author of 3 books, "Your Child's World," "How God Made You," and "How You Were Born." He was co-author of "Psychiatry and Catholicism" and had contributed to other books. His latest book, "The Disappearing Sexes," will be published soon.

Dr. Odenwald was a diplomate of the American Board of Psychiatry and Neurology. He was elected an Active member of the Medical Society

of the District of Columbia in 1949. He held membership in the American Medical Association, the American Psychiatric Association, the American Orthopsychiatric Association, the American Geriatrics Society, and other scientific organizations. He was a member and President for 2 years of the Mid-Atlantic Chapter of the American Medical Writers' Association. He was also Past President of the Washington Associates of the Academy of Religion and Mental Health.

He leaves his wife, Mrs. Dorothy Quirin Odenwald, and 3 sons, John F., of 12110 Tulip Grove Drive, Bowie, Md.; Dr. Robert P., Jr., of 3907 Pennsylvania Avenue, S.E.; and Francis J., a Peace Corps trainee at St. John's College, Annapolis, Md. He also leaves a brother, Ludwig Odenwald, in Starsbourg-Neudorf, France.

Joseph Gouverneur Gathings, M.D.

(1898-1965)

DR. JOSEPH G. GATHINGS, dermatologist and educator, died, June 28, 1965, at Freedmen's Hospital. He lived at 1100 Fifth Street, N.E.

Dr. Gathings was born in Richmond, Texas, July 11, 1898. He attended schools in Texas and then enrolled in the College of Liberal Arts at Howard University. He left Howard to take his first year of medical study at Meharry Medical College in 1924-25 and then returned to Howard University, receiving his medical degree in 1928. After interning the following year at Freedmen's Hospital, he went to Houston, Texas in 1929 to establish a private practice. He remained in general practice in Houston until 1941.

Dr. Gathings enrolled for postgraduate training in dermatology and syphilology at New York Post-Graduate Hospital, and continued his studies for 2 years, from 1941 to 1943. He returned to Houston to practice his specialty, and in 1946 came to Washington. He joined the faculty of Howard in 1946 and was Professor of Dermatology and Syphilology in the College of Medicine at the time of his death.

Dr. Gathings was President of the National Medical Association in 1951-52. He was a diplomate of the American Board of Dermatology and Syphilology, a Fellow of the American Academy of Dermatology and Syphilology, an Active member of the D. C. Medical Society since 1953, and a member of the Medico-Chirurgical Society of the District of Columbia. He was a member of the National Medical Committee of the National Association for the Advancement of Colored People.

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IN BRIEF; ACTIONS AND USES: A single dose of Imferon (iron dextran injection) will measurably begin to raise hemoglobin and a complete course of therapy will effectively rebuild iron reserves. The drug is indicated only for specifically-diagnosed cases of iron deficiency anemia and then only when oral administration of iron is ineffective or impractical. Such iron deficiency anemia may include: patients in the last trimester of pregnancy; patients with gastrointestinal disease or those recovering from gastrointestinal surgery; patients with chronic bleeding with continual and extensive iron losses not rapidly replenishable with oral iron; patients intolerant of blood transfusion as a source of iron; infants with hypochromic anemia; patients who cannot be relied upon to take oral iron.

COMPOSITION: Imferon (iron dextran injection) is a well-tolerated solution of iron dextran complex providing an equivalent of 50 mg. of elemental iron in each cc. The solution contains 0.9% sodium chloride and has a pH of 5.2-6.0. The 10 cc. vial contains 0.5% phenol as a preservative.

ADMINISTRATION AND DOSAGE: Dosage, based upon body weight and Gm. Hb./100 cc. of blood, ranges from 0.5 cc. in infants to 5.0 cc. in adults, daily, every other day, or weekly. The total iron requirement for the individual patient is readily obtainable from the dosage chart in the package insert. Deep intramuscular injection in the upper outer quadrant of the buttock, using a Z-track technique, (with displacement of the skin laterally prior to injection), insures absorption and will help avoid staining of the skin. A 2-inch needle is recommended for the adult of average size.

SIDE EFFECTS: Local and systemic side effects are few. Staining of the skin may occur. Excessive dosage, beyond the calculated need, may cause hemosiderosis. Although allergic or anaphylactoid reactions are not common, occasional severe reactions have been observed, including three fatal reactions which may have been due to Imferon (iron dextran injection). Urticaria, arthralgia, lymphadenopathy, nausea, headache, and fever have occasionally been reported. Initial test doses of 0.5 cc. are advisable.

PRECAUTIONS: If sensitivity to test doses is manifested, the drug should not be given. Imferon (iron dextran injection) must be administered by deep intramuscular injection only. Inject only in the upper outer quadrant of the buttock, not in the arm or other exposed area.

CONTRAINDICATIONS: Imferon (iron dextran injection) is contraindicated in patients sensitive to iron dextran complex. Since its use is intended for the treatment of iron deficiency anemia only, it is contraindicated in other anemias.

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He is survived by his wife, Mrs. Elizabeth Parr Gathings, of the home address; a son, Joseph B. Gathings, Jr., 3807 Massachusetts Avenue, S.E.; his mother, Mrs. Clara Gathings Evans, of Richmond, Texas; and a sister, Mrs. Alvin Smith, of Houston, Texas.

Henry Augustine Latane, M.D.

(1880-1965)

DR. HENRY A. LATANE, eminent Alexandria, Virginia physician, died at the Circle Terrace Hospital in Alexandria, July 3, 1965. He lived at 515 North Overlook Drive in Alexandria.

Born in Wakefield, Va., April 4, 1880, Dr. Latane was a direct descendant of Augustus Washington, half-brother of George Washington.

He was a member of the Class of 1912 at the University of Virginia Medical College.

His special interest was diseases of the chest. He set up tuberculosis clinics in Arlington, Alexandria and Fairfax County. Another innovation of his was the laboratory of the Alexandria Hospital, the Hospital's first medical laboratory. It was dedicated as the Latane Laboratory in 1941. He was Chief of Medicine at Alexandria Hospital for 15 years.

Dr. Latane began his practice in Alexandria in 1920, after completing 18 months' service in the U.S. Army during World War I. For most of his years of practice he maintained his office and home at 311 North Washington Street. Prior to his death his office was at 700 Duke Street.

In 1955 he was named "Physician of the Year" by the Virginia Medical Society. He served 3 terms as President of the Alexandria Medical Society. He was an Associate member of the Medical Society of the District of Columbia from 1921 to 1956. He was also a member of the American College of Chest Physicians, the American Medical Association, and the Southern Medical Association.

He was married to the late Polly Graham Latane. There were no children. He is survived by 2 sisters, Mrs. Frank Stiff and Mrs. Richard Washington, both of Oak Grove, Va., and 2 brothers, James and Lawrence Latane, both of Wakefield, Va.

Rufus Martin Roll, A.B., M.D., F.A.C.S.

(1912-1965)

DR. RUFUS M. ROLL, obstetrician-gynecologist, died at the Washington Hospital Center, August 4, 1965. He had practiced in Washington since 1943, for the past several years conducting his practice from his home at 2909 Cleveland Avenue, N.W.

Dr. Roll was born in Greenville, Ky., June 28, 1912. He received his Bachelor's degree in 1934 and his medical degree in 1938, both from Johns Hopkins University. He interned at New York Hospital the following year and was a resident physician in obstetrics and gynecology at the same hospital from 1939 to 1940. He continued training in his specialty at French Hospital in New York City and at Johns Hopkins Hospital.

He had served on the faculty of George Washington University School of Medicine since 1947. He was senior attending in his specialty at the Washington Hospital Center, attending at D.C. General Hospital, and associate at the George Washington Hospital.

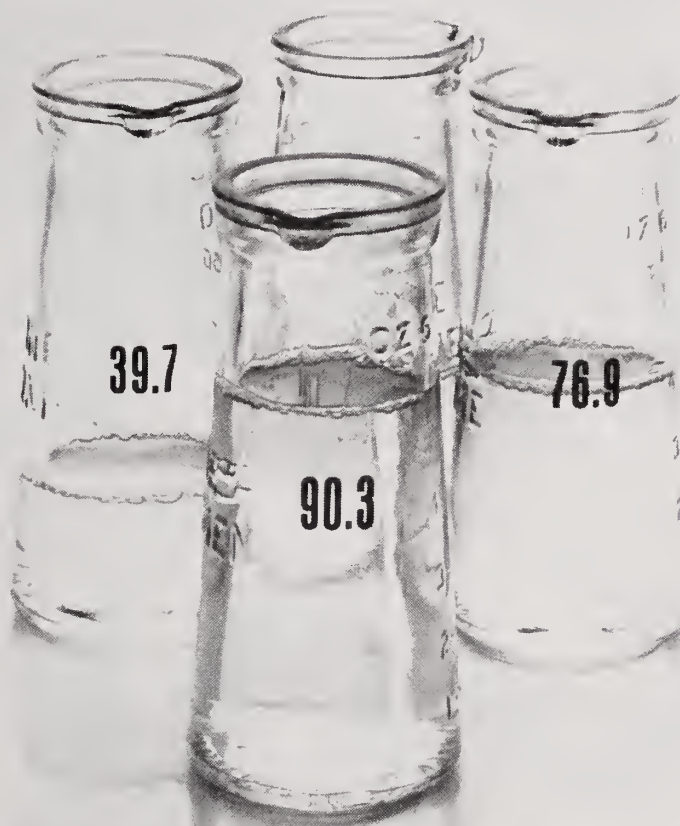
He was Board-certified in Obstetrics and Gynecology. He was elected an Active member of the Medical Society of the District of Columbia in 1944. He was a Fellow of the American College of Surgeons and a member of the American Medical Association, the Southern Medical Association, Washington Gynecological Society, and member and Past President of the Louis Mackall Medical Society.

Surviving him is his wife, Mrs. Anita Stallman Roll.

Serum Glycoproteins in Idiopathic Hypoalbuminemia—Bacchus

(Continued from page 406)

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9. SHETLAR, M. R., AND OTHERS: Serum polysaccharide level in malignancy and other pathological conditions. *Cancer Res.*, 1949, **9**, 515.



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To determine the relative efficacy of thiazide diuretics in congestive heart failure, Metahydrin (trichlormethiazide) and three other thiazides were measured against Mercuhydrin[®] (meralluride injection)—the standard diuretic. "The results leave little doubt that the diuretic efficacy, that is, the 'ceiling effect' in these terms, is not the same for different thiazides."* The assays ranged from about 40% of the effectiveness of Mercuhydrin through 67%, 77% to 90% for Metahydrin. The latter two values were thought to be significantly different from the lowest value and to be therapeutically important.

*Gold, H., *et al*: Closed Panel Conference: Present Status of the Management of Congestive Failure and Advances in Diuretic Therapy, *Journal of New Drugs*, 1:177, July-August, 1961.

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IN BRIEF: ADMINISTRATION AND DOSAGE: One 2 mg. or 4 mg. tablet once or twice daily. In acute, severe decompensation, Mercuhydrin[®] (meralluride injection) may be necessary initially.

PRECAUTIONS: As with all effective diuretics, vigorous therapy may produce electrolyte depletion. Patients with severely reduced renal function should be observed carefully since thiazides may be contraindicated. Care should be taken with patients predisposed to diabetes or gout. Patients with a tendency to potassium deficiency, as in hepatic cirrhosis or diarrheal syndromes, or those under therapy with digitalis, ACTH, or certain adrenal steroids, also should be watched carefully.

SIDE EFFECTS: Nausea, flushing, constipation, skin rash, muscle cramps and gastric discomfort have been occasionally noted; rarely thrombocytopenia and bone marrow depression, photosensitivity, cholestatic jaundice, pancreatitis, perimacular edema, gout and diabetes have been caused by administration of thiazides.

CONTRAINDICATIONS: Complete renal shutdown; rising azotemia or development of hyperkalemia or acidosis in severe renal disease; demonstrated hypersensitivity.

HOW SUPPLIED: Bottles of 100 and 1000 tablets.

BOOK REVIEWS

Physiology of the Eye. Clinical Application, 4th ed. FRANCIS HEED ADLER, M.A., M.D., F.A.C.S. Price, \$18.75. Pp. 889, with 437 illustrations, including 2 in color. St. Louis: Mosby, 1965.

This excellent work, now in its fourth edition since 1950, remains unopposed as a reading source on functions of the visual system. As a text in physiology it is a little unique, having been written by a practicing physician who is also a respected investigator in physiology. The outcome is a very readable book showing clinical relevance in all its chapters. Also, the text and illustrations are among the clearest found anywhere in what we call the ophthalmic literature.

One fault that this reviewer finds is the continued heavy emphasis on physiology of the retina, visual sense and motility, accounting for almost half the 877 pages of text. In light of current investigations of vascular, thermal and uveal functions within the eye it is likely that future editions will require a different balance.

It is doubtful that anyone can pass the American Board Examinations in Ophthalmology without consulting 'Adler.' This grim fact should not hide the point that it is a splendid text.

J. O'ROURKE, M.D.

Synopsis of Clinical Tropical Medicine. Pathogenesis, clinical picture, diagnosis, prognosis, and therapy. OSCAR FELSENFELD, M.D., M.Sc. Price, \$9.85. Pp. 378, with 40 illustrations. St. Louis: Mosby, 1965.

The author has dedicated this small and compact volume "to those here and abroad who desire to help developing countries... in their struggle for better health." In addition to the public health workers and religious medical missionaries, who in the past were, with minor exceptions, the only United States medical representatives on the international scene, there are now literally hundreds of American clinicians and specialists of all categories who make annual medical pilgrimages for varying periods of time to these far distant and medically deprived lands. This concise and well-written compendium on the prevalent diseases of the tropical and revolutionary seething areas of the world, where so much present-day history is being written, can be highly recommended to all the adventuresome medical personnel of CARE-MEDICO, the HOPE Ship, the Peace Corps, and other less well known international medical organizations. Any of these intrepid medical travelers will find, on perusing this little volume, which can easily be carried in one's pocket, a well-written, smoothly flowing text which carries one along page after page as if one were reading a highly interesting novel.

The author, who has had extensive experience in basic research in tropical diseases as well as in organizing and administering international medical programs in Southeast Asia and South America, has done an

exemplary job in focusing the attention of the interested physician on the salient and pertinent aspects of the many diseases with which he will be confronted overseas. He emphasizes that "the gravest tropical problem is tuberculosis" and that diarrhea, respiratory diseases and hepatitis follow, in that order. With malnutrition and protein starvation constituting an ever-present threat to the health of these unfortunate peoples, the basic and fundamental health problems as well as the social and economic instability of the other half of the world become clearly apparent. This small book should become the medical vademecum of each and every one of our overseas medical ambassadors. There is only one fringe item that is disturbing—the price has been set much too high.

PETER D. COMANDURAS, M.D.

Leopold's Principles and Methods of Physical Diagnosis, 3rd ed. HENRY U. HOPKINS, M.D. Price, \$8.50. Pp. 503, with 339 illustrations. Philadelphia: Saunders, 1965.

This book purports to state the what, the how, and the why of taking the history and performing the physical examination. In format it is of medium size, comfortable to handle. Among American texts it lies, with 503 pages, between the encyclopedic Adams (926 pages) and the compact Martini (275 pages). The type face is easy to read. There are over 300 illustrations, mostly well-chosen photographs. It is well indexed. There are almost no references to specific papers in the literature. The style is readable but pedestrian. Special chapters on the history, the psychiatric survey (in the most general terms), and the pediatric examination are included.

Literally a whole page is devoted to the water-hammer pulse. In case you share my ignorance of what a water-hammer is, a footnote gives you enough details to construct one. When you have finished, you will have something about as useful as the knowledge of the water-hammer pulse will be in your practice. Somewhere in this superfluous page it is pointed out that although the finding is classically associated with aortic insufficiency, it is nonspecific and may be seen in a variety of diseases.

On the subject of aortic insufficiency, 2½ pages are given over to the signs of deMusset, Quincke, Traube, Duroziez, and other eponymic immortals dear to the heart of the physical diagnosis teacher more interested in examining the medical student than the patient. But nowhere is there any mention of the facts that in this ailment the diastolic blood pressure is of critical importance, that the lower the diastolic blood pressure the worse the regurgitation and the greater the need for aortic valve surgery.

To take another example, let us look at the subject of gallop rhythm. It is stated that it resembles the sounds produced by a galloping horse. Actually, the useful ventricular diastolic gallop only rarely sounds like a

(Continued on page 32)

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190

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Hypertension has been called the price of success...and in some life-situations, the cost of failure. In either event, Metatensin lowers blood pressure, cushions the patient against stress and retards the progress of disease. Metatensin is effective and economical. It is well-tolerated over long periods.

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In Brief: Patients with hepatic cirrhosis or diarrheal syndromes, or under therapy with digitalis, ACTH, or potassium-losing steroids, should be observed for signs of hypokalemia. With thiazides, electrolyte depletion, diabetes, gout, granulopenia, nausea, pancreatitis, cholestatic jaundice, flushing, mild muscle cramps, constipation, photosensitivity, acute myopia, perimacular edema, paresthesias, neonatal bone marrow depression in infants of mothers who received thiazides during pregnancy, skin rash or purpura with or without thrombocytopenia, may occur. With reserpine, untoward effects may include depression, peptic ulcer and bronchial asthma. Withdraw medication at least 7 days prior to electroshock therapy, 2 weeks prior to elective surgery. Contraindications are complete renal shutdown, rising azotemia or development of hyperkalemia or acidosis in severe renal disease.

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Book Reviews

(Continued from page 30)

galloping horse. If you waited for sufficiently equine sound-effects before diagnosing it, you would miss 90 per cent of those that come under your stethoscope. The book states that "gallop is heard in various types of heart failure. It has been called 'the cry of the failing heart.'"

The author does not state whether he agrees with this vivid characterization, but perhaps he is wise not to commit himself since it would be true of ventricular diastolic gallop but not of atrial diastolic gallop, and he does not specify which he is talking about. Since the ventricular diastolic gallop is an important and useful clue, one would expect to be given some guidance in finding it. But nowhere is it stated whether to use bell or diaphragm, where to hear it, whether it is more likely to be heard with the patient sitting or reclining, whether it is heard with every beat or only occasionally for a few beats, or indeed exactly what it sounds like.

In short, the book is a restatement of old and sometimes outmoded subject matter, but it lacks much knowledge which has been gained by recent techniques, particularly phonocardiography. When so few physical diagnosis textbooks cover well the newer knowledge of heart sounds, the author had an opportunity to make a nearly unique contribution, but did not take advantage of it.

F. G. MACMURRAY, M.D.

This Is Psychiatry. FELIX VON MENDELSSOHN, M.D. Price, \$7.95. Pp. 237. New York: Franklin Watts, 1964.

The best parts of Dr. von Mendelssohn's recently published book, "This Is Psychiatry," are the ones having to do with the Brain Syndromes, with what might be called "Institutional Psychiatry," and his summary of the 1960 book, "Action for Mental Health."

The weakest parts by far are the ones dealing with the psychoneuroses, the character disorders, and his uninformed and misleading comments about psychotherapy, concerning which he reveals a lack of both experience and understanding.

For information concerning the important relations of psychiatry and the law the reader is referred to other texts.

Perhaps it is more than simply old-fashioned of Dr. Mendelssohn to hold "lack of will power" so important "in establishing or reinforcing the addiction" to alcohol.

Although he correctly refers to the concept of "secondary gain" in connection with conversion reactions, one wonders why he neither explains nor mentions the "primary gain" in this same connection.

As to the title of the book itself and by way of a summary, most likely this is the psychiatry of Dr. von Mendelssohn and of perhaps some of the less than 40 per cent of all psychiatrists in the United States who are solely practicing institutional psychiatry, but it is likely that the interested layman to whom this book is



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destined might wish to know more about contemporary American psychiatry than is here offered.

JEAN H. MÉNÉTRÉZ, M.D.

Industrial and Traumatic Ophthalmology. Symposium of the New Orleans Academy of Ophthalmology. Contributors: ARTHUR H. KEENEY, M.D., HEDWIG S. KUHN, M.D., RODERICK MACDONALD, JR., M.D., FRANK W. NEWELL, M.D., JOSEPH F. NOVAK, M.D., RALPH W. RYAN, M.D., and LORENZ E. ZIMMERMAN, M.D. Price, \$14.50. Pp. 321, with 134 illustrations. St. Louis: Mosby, 1964.

Physicians of varied clinical interests will find this a useful library addition. Chapters on home and industrial hazards, lighting suggestions, and driving criteria are of obvious value to all, including the interested lay public.

Parts of the book are for the physician directing large health programs, with advice on the care of eye emergencies and the use of nursing help. In a community such as ours with adequate specialty coverage there might be some legal objections to other than prompt ophthalmologic referral in many injuries. The discussion of chemical hazards should be welcomed by any physician and would be a handy reference for the nonophthalmologist confronted by an acute eye problem. Dr. Zimmerman of the AFIP covers various aspects of the pathology of ocular trauma and its sequelae with his usual excellent presentation. Material in the book dealing with technicalities of diagnosis and treatment of eye injuries offers little new material to the ophthalmologist but the closing "round table" discussion by the participants of this Symposium may answer some of our questions. There is a section on the rating of eye disabilities which would be quite valuable in Workmen's Compensation cases and medicolegal problems.

In summary, this book does an adequate job of filling a void in most medical libraries. It will provide interesting reading to all physicians and particularly those with employee health programs and Workmen's Compensation cases. Selected chapters may serve as worthwhile references for office use.

DAVID K. BERLER, M.D.

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**often relieves
mental pain
in 2-5 days**



Doré Illustration
from
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Norpramin is a rapid-acting specific drug for the treatment of depression. Depressive signs and symptoms—sometimes described as "mental pain"—typically begin to improve in 2-5 days. Patients are more hopeful, less empty and less weighed down by their troubles. Norpramin has only slight sedative qualities, nevertheless anxiety secondary to depression is frequently relieved as depression is lifted. If anxiety or tension persists it can be controlled by adding a tranquilizer or by reducing dosage. Norpramin is not a MAO inhibitor. Side effects are usually mild.

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IN BRIEF:

Indications: In depression of any kind—neurotic and psychotic depressive reactions; manic-depressive or involutional psychotic reactions.

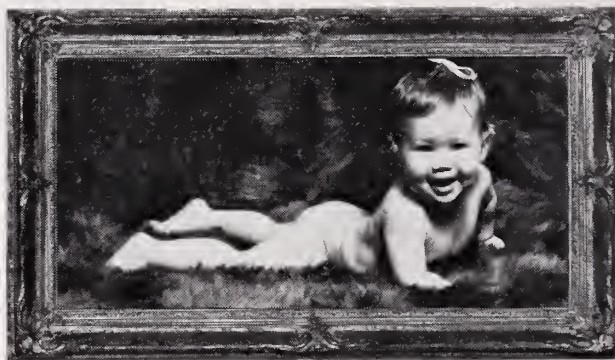
Contraindications and Precautions: Glaucoma, urethral or ureteral spasm, recent myocardial infarction, severe coronary heart disease and epilepsy. Should not be given within two weeks of treatment with a monoamine oxidase inhibitor. Safety in human pregnancy has not been established.

Adverse Effects: Side effects, usually mild, may

include: dry mouth, constipation, dizziness, palpitation, delayed urination, "bad taste," sensory illusion, tinnitus, agitation and stimulation, sweating, drowsiness, headache, orthostatic hypotension, flushing, nausea, cramps, weakness, blurred vision and mydriasis, rash, allergy, transient eosinophilia, granulopenia, altered liver function, ataxia and extrapyramidal signs.

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1—Pomeranze, J., and Gadek, R.J.: Am. Pract. & Digest Treat. 8:73-77 (Jan.) 1957

2—Asher, L.M.: Am. J. Digestive Diseases 4:272 (Apr.) 1959



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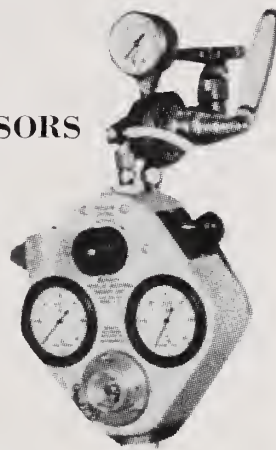
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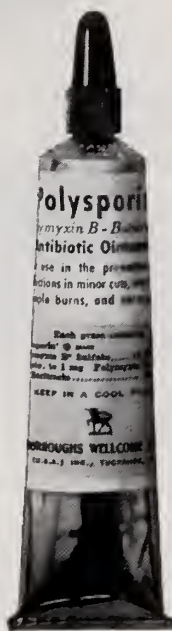
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September 28-October 1: American Roentgen Ray Society. Washington Hilton Hotel, Washington. Address: Dr. James C. Cook, Managing Director, 10 Peterboro Street, Detroit, Mich.

October 14: George Washington University School of Medicine: Symposium on Suicide—Its Nature, Causes and Prevention. Lisner Auditorium, Washington. Address: Dr. Leon Yochelson, Chairman, Department of Psychiatry, 901 23rd Street, N.W., Washington, D.C. 20037.

October 15-17: American Heart Association. Hotel Americana, Bal Harbour, Fla. Address: Mr. H. Douglas Chisholm, AHA, 44 East 23rd Street, New York, N. Y. 10010.

October 17-21: Fifth International Congress of Chemotherapy and Interscience Conference on Antimicrobial Agents and Chemotherapy. Shoreham Hotel, Washington. Address: Dr. R. W. Sarber, Executive Secretary, American Society for Microbiology, 115 Huron View Blvd., Ann Arbor, Mich.

October 18-22: Annual Clinical Congress, American College of Surgeons. Atlantic City, N. J. Address: Secretary, ACS, 55 East Erie Street, Chicago, Ill. 60611.

October 23-28: 34th Annual Meeting, American Academy of Pediatrics. Palmer House, Chicago. Address: Dr. E. H. Christopherson, *Executive Director*, 1801 Hinman Avenue, Evanston, Ill. 60204.

November 3-6: American Urological Association—Mid-Atlantic Section. Shoreham Hotel, Washington. Address: Dr. Sam D. Graham, Secretary, 2013 Augusta Street, Staunton, Va.

November 10-14: 50th Anniversary Meeting, American Medical Women's Association. Chicago. Address: Mrs. Gertrude F. Conroy, Executive Secretary, 1790 Broadway, New York, N. Y. 10019.

November 12-14: Association of Clinical Scientists. Statler-Hilton Hotel, Washington. Address: Dr. Robert P. MacFate, Secretary, 300 North State Street, Chicago, Ill.

November 15-17: Association of Military Surgeons of the United States. Washington Hilton Hotel, Washington. Address: Brig. General Frank E. Wilson, MC, USAR, Executive Director, 1500 Massachusetts Avenue, N.W., Washington, D.C. 20005.

November 22-24: Annual Scientific Assembly, The Medical Society of the District of Columbia. Washington Hilton Hotel, Washington. Address: Mr. George W. Cooley, Executive Director, 1718 M Street, N.W., Washington, D.C. 20036.

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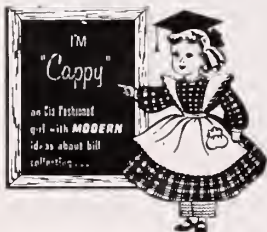
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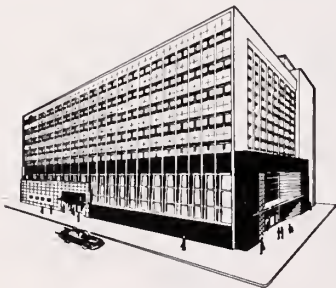


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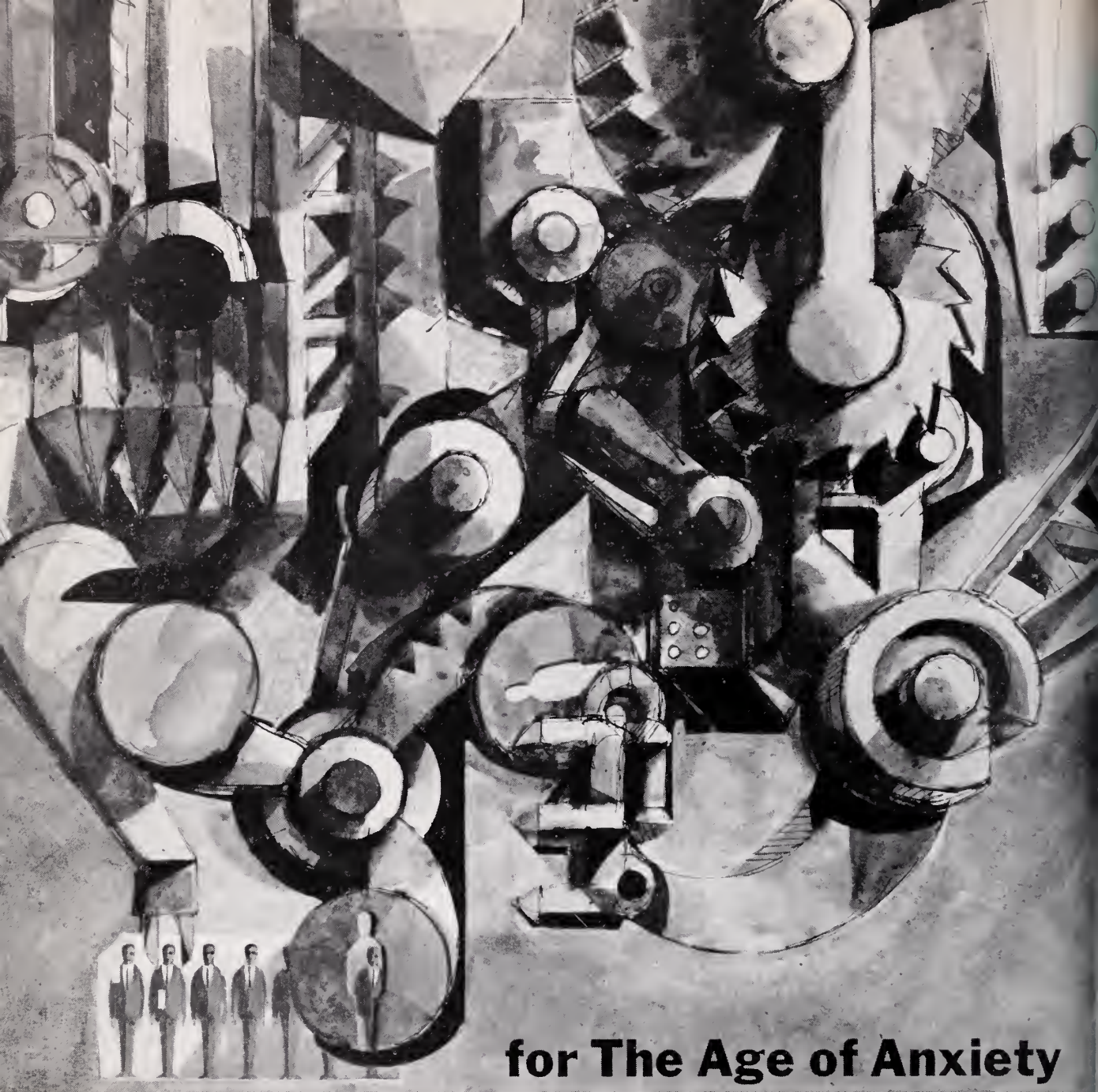
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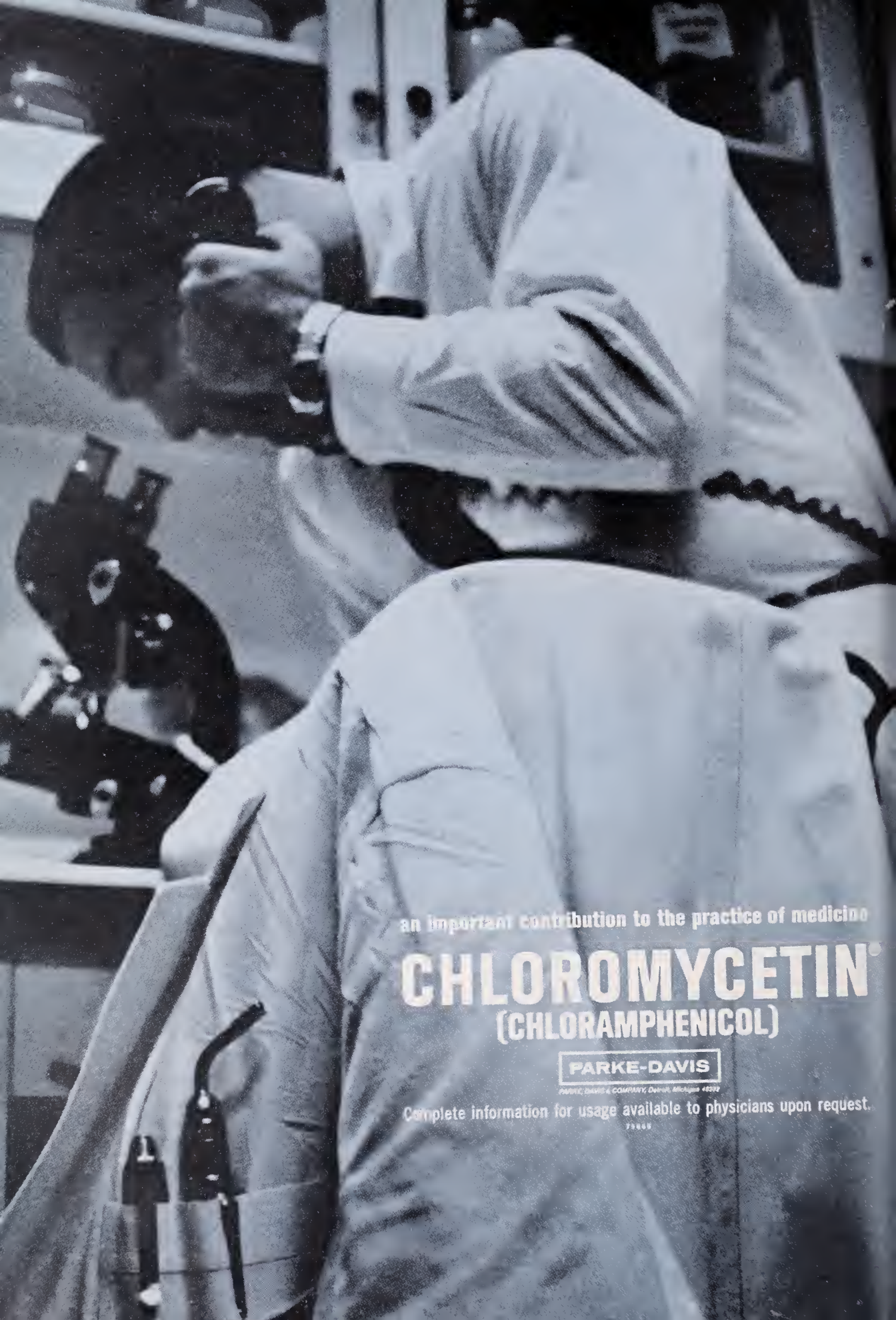
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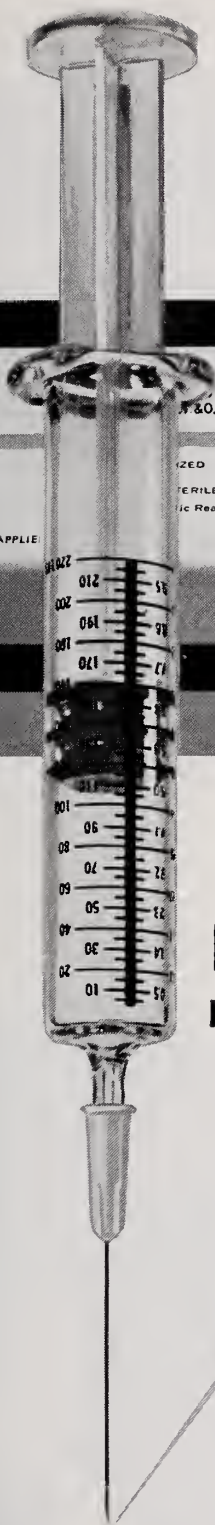
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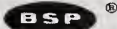
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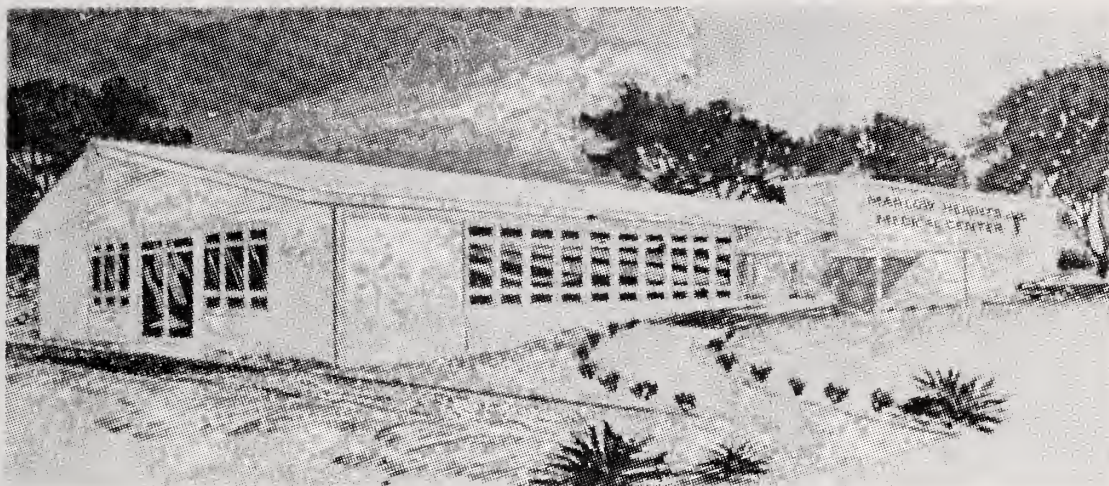


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Side effects: the incidence of drowsiness and other atropine-like effects is low. However, caution patients engaged in activities where alertness is mandatory.



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Edema, danger of cardiac decompensation; history or symptoms of peptic ulcer; renal, hepatic or cardiac damage; history of drug allergy; history of blood dyscrasia. Because of the increased possibility of toxic reactions, the drug should not be given when the patient is senile, or when other potent chemotherapeutic agents are given concurrently. Large doses of Butazolidin alka are contraindicated in patients with glaucoma.

Precautions

Before prescribing, the physician should obtain a detailed history and perform a com-

plete physical and laboratory examination, including a blood count. The patient should be kept under close supervision and should be warned to report immediately fever, sore throat, or mouth lesions (symptoms of blood dyscrasia); sudden weight gain (water retention); skin reactions; black or tarry stools. Regular blood counts should be made. The drug should be used with greater care in the elderly.

Warning

If coumarin-type anticoagulants are given simultaneously, the physician should watch for excessive increase in prothrombin time. Pyrazole compounds may potentiate the pharmacologic action of sulfonyleurea and sulfonamide-type agents and insulin. Patients receiving such concomitant therapy should be carefully observed for this effect.

Adverse Reactions

The most common adverse reactions are nausea, edema and drug rash. The drug may reactivate a latent peptic ulcer. Infrequently, agranulocytosis, generalized allergic reaction, stomatitis, salivary gland enlargement, vertigo and languor may occur. Leukemia and leukemoid reactions have been reported but cannot definitely be attributed to the drug. Thrombocytopenic purpura and aplastic anemia are also possible side effects. Confusional states, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hepatitis, jaundice, and several cases of

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Average Dosage

Initially, give 400 mg. daily (one tablet or capsule q.i.d.), reducing this, if possible, when a favorable therapeutic effect has been obtained. If after one week there has been no response, discontinue the drug. To minimize gastric distress, Butazolidin alka capsules may be the preferred form.

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October 25-27: American College of Gastroenterology. Americana Hotel, Bal Harbour, Florida. Address: Mr. Daniel Weiss, *Executive Secretary*, 33 West 60th Street, New York, N. Y. 10023.

October 30: American College of Physicians (Maryland-District of Columbia Regional). Hurd Hall, Johns Hopkins Hospital, Baltimore. Address: Dr. Samuel P. Asper, Jr., Johns Hopkins Hospital, Baltimore, Md. 21205.

November 1-4: Southern Medical Association. Houston, Texas. Address: Mr. Robert F. Butts, *Executive Director*, 2601 Highland Avenue, Birmingham, Ala. 35205.

November 3-6: American Urological Association—Mid-Atlantic Section. Shoreham Hotel, Washington. Address: Dr. Sam D. Graham, *Secretary*, 2013 Augusta Street, Staunton, Va.

November 10-14: 50th Anniversary Meeting, American Medical Women's Association. Chicago. Address: Mrs. Gertrude F. Conroy, *Executive Secretary*, 1790 Broadway, New York, N. Y. 10019.

November 12-14: Association of Clinical Scientists. Statler-Hilton Hotel, Washington. Address: Dr. Robert P. MacFate, *Secretary*, 300 North State Street, Chicago, Ill.

November 14-19: American Academy of Ophthalmology and Otolaryngology. Palmer House, Chicago. Address: Dr. William L. Benedict, *Executive Secretary*, 15 Second Street, S.W., Rochester, Minn. 55901.

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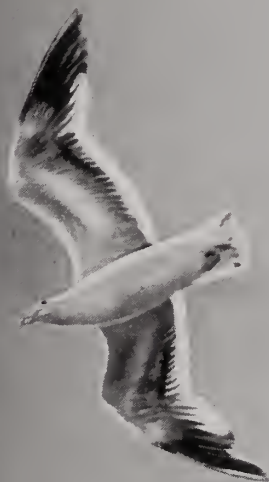
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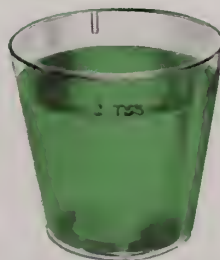
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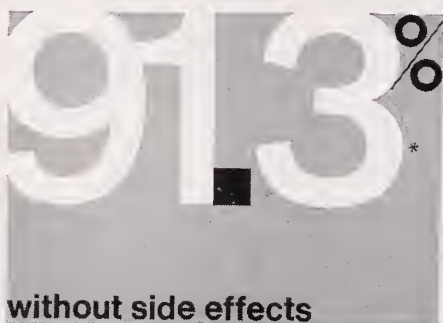


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References: (1) Carroll, G.: Urologists' Letter Club, June 1, 1964. (2) McDonald, D. F., and Short, H. B.: Address to the Fourth Interscience Conference on Antimicrobial Agents and Chemotherapy, New York, Oct. 26-28, 1964.

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"...it is extremely difficult and sometimes impossible to differentiate between 'pure depression' and anxiety and it is questionable whether depression without a certain degree of anxiety really exists."

Lehmann, H. E., *Canad. Psychiat. Assn. J.* 4(5): 1-12, 1959

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Precautions: *Meprobamate*—Careful supervision of dose and amounts prescribed is advised. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after use for weeks or months at excessive dosage. Abrupt withdrawal may precipitate recurrence of pre-existing symptoms, or withdrawal reactions including, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, the dose should be reduced and operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may pos-

sibly be increased by meprobamate. Grand mal seizures may be precipitated in persons suffering from both grand and petit mal. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

Side effects: Side effects associated with recommended doses of 'Deprol' have been infrequent and usually easily controlled. These have included drowsiness and occasional dizziness, headache, infrequent skin rash, dryness of mouth, gastrointestinal symptoms, paresthesias, rare instances of syncope, and one case each of severe nervousness, loss of power of concentration, and withdrawal reaction (status epilepticus) after sudden discontinuation of excessive dosage.

Benactyzine hydrochloride—Benactyzine hydrochloride, particularly in high dosage, may produce dizziness, thought-blocking, a sense of depersonalization, aggravation of anxiety or disturbance of sleep patterns, and a subjective feeling of muscle relaxation, as well as anticholinergic effects such as blurred vision, dryness of mouth, or failure of visual accommodation. Other reported side effects have included gastric distress, allergic response, ataxia, and euphoria.

Meprobamate—Drowsiness may occur and, rarely, ataxia, usually controlled by decreasing the dose. Allergic or idiosyncratic reactions are rare, generally developing after one to four doses. Mild reactions are characterized by an urticarial or erythematous, maculopapular rash. Acute nonthrombocytopenic purpura with peripheral edema and fever, transient leukopenia, and a single case of fatal bullous dermatitis after administration of meprobamate and prednisolone have been reported. More severe and very rare cases of hypersensitivity may produce fever, chills, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, anaphylaxis, stomatitis and proctitis. Treatment should be symptomatic in such cases, and the drug should not be reinstituted. Isolated cases of agranulocytosis, thrombocytopenic purpura, and a single fatal instance of aplastic anemia have been reported, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity has been reported, usually after excessive meprobamate dosage. Suicidal attempts may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

Dosage: Usual starting dose, one tablet three or four times daily. May be increased gradually to six tablets daily and gradually reduced to maintenance levels upon establishment of relief. Doses above six tablets daily are not recommended even though higher doses have been used by some clinicians to control depression and in chronic psychotic patients.

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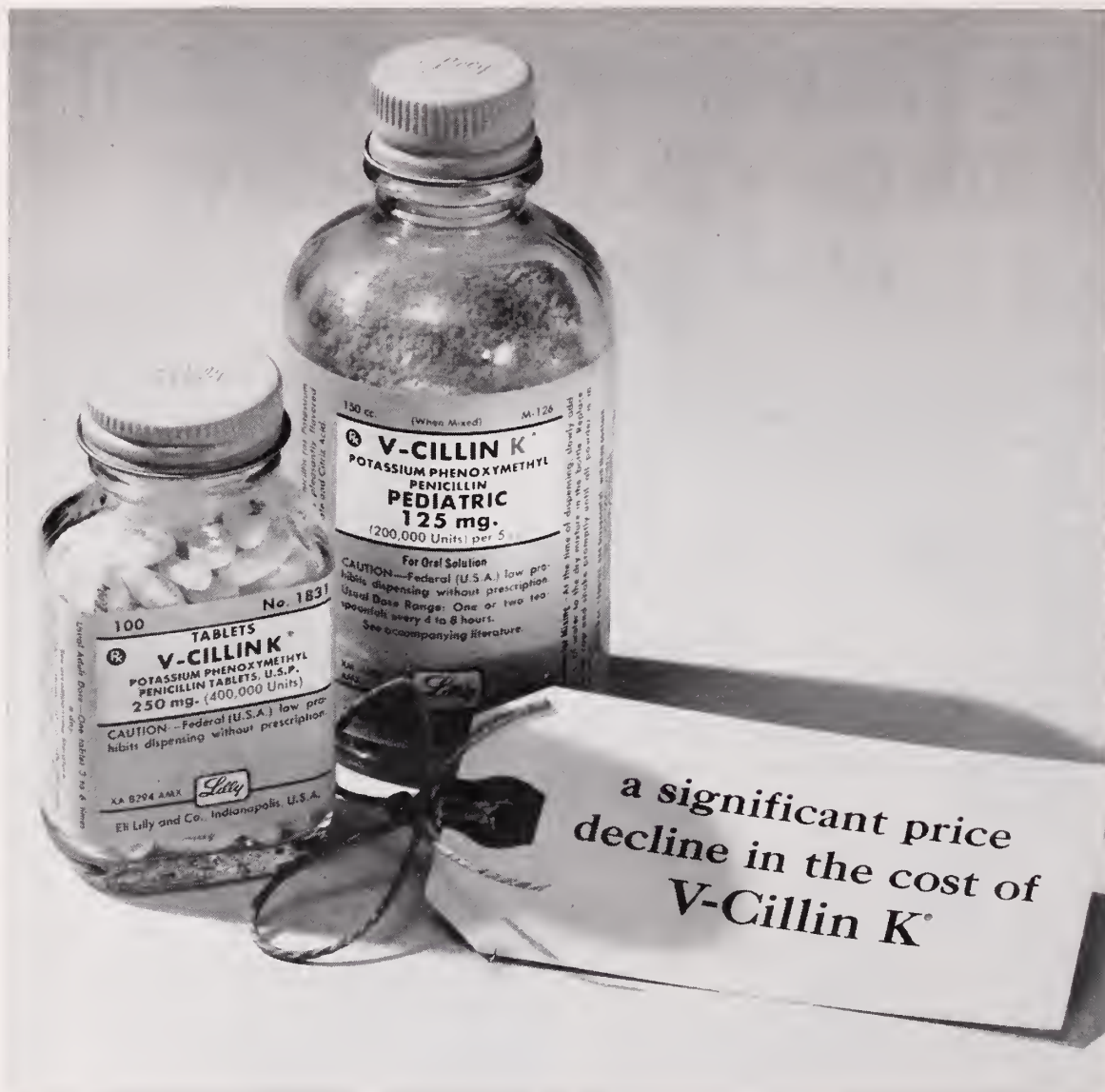
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A New Approach to the Treatment of Inoperable Brain Tumors

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BY THE TERM "inoperable brain tumors" we mean those gliomas of the central nervous system which cannot be surgically removed in their entirety. This is unfortunately true for the vast majority of such lesions. In a recent paper on the quality of survival in treated patients with supratentorial gliomata, M. J. Betty¹ reported that in a group of 260 adults only 12.6 per cent were able to return to work or full domestic duty following treatment consisting of surgical resection with or without radiotherapy. Only 12 patients survived 4 years or more, and these had the more benign types of glioma. Although better quality and quantity of survival have been reported in

a few patients with gliomas, especially in patients with some infratentorial tumors and in the younger age-group, this sorry picture is indeed representative of the unfortunate results of this disease at the present time. In addition to surgical excision and radiotherapy other therapeutic efforts include in situ destruction by radioisotopes, neutron capture therapy, freezing, and the parenteral use of cytotoxic drugs. None of these methods has emerged as significantly useful and indeed often do more harm than no treatment at all. The use of chemotherapeutic agents by local arterial perfusion is theoretically attractive because of the increased dosages possible. However, the results have not been good; life has not been prolonged, and no patient with a glioma has been cured by this technique.² It is reasonable to assume that the blood-brain barrier reduces the entry of chemotherapeutic agents into the tumor tissue, although the barrier is certainly not nor-

*From the Branch of Surgical Neurology, National Institute of Neurological Diseases and Blindness, National Institutes of Health, Public Health Service, United States Department of Health, Education, and Welfare, Bethesda, Maryland.

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mal in such situations. Moreover, the delivery of such therapeutic agents to the glioma is probably inefficient when given via vein or artery because the actual amount of drug taken up by the tumor is quite small compared to the total dosage taken up by the rest of the non-neoplastic tissues. These facts have led many workers to consider the direct intrathecal use of chemotherapeutic agents in malignant neoplasia of the central nervous system. The development of this approach, however, was hampered by 2 factors. First, the intrathecal toxicity of such drugs limits the amount that can be given in single or repeated instillations. Such injections are usually via the lumbar route, and this results in poor distribution of substances within the cerebrospinal fluid (CSF) space. Second, there are significant hazards and discomforts of repeated entry into the intrathecal space at any level, and particularly if instillation into the cerebral subarachnoid pathways is desired.

These difficulties have been considerably reduced following the introduction of a subcutaneous chronically implantable CSF reservoir and pump about 2 years ago.³ This device (figure 1), originally used in the management of fungal meningitides, has made it feasible to perfuse safely the CSF space at any level of the central nervous system and thus allow the repeated, prolonged exposure of the neoplastic tissues to chemotherapeutic agents, directly by-passing the limiting effect of the blood-brain barrier.

Selection of Patients

A clinical trial of this new approach to the treatment of gliomas has been initiated in a collaborative effort of the Branch of Surgical Neurology, National Institute of Neurological Diseases and Blindness and the National Cancer Institute. Patients are accepted in either of 2 categories, adults and children. Adults must have either glioblastomas or astrocytomas, and children must have pontine gliomas or medulloblastomas. Except for children with pontine glioma, all cases have a definite tissue diagnosis before consideration for CSF perfusion therapy. No selection for age or sex other than that mentioned is made. Moribund patients or patients with severe respiratory, urinary or wound infections and CSF leaks are not considered suitable for this treatment. Initially all patients who are accepted for this trial must be shown to have active progression of their glioma in spite of all neurosurgery, radiotherapeutic, or other currently ac-

cepted therapy of the highest standards that have been tried.

Selection of Chemotherapeutic Agents

Initially, faced with the paucity of experimental or other evidence for the ideal cytotoxic drug to be used we have investigated the effect of Methotrexate®. The selection of this drug was based on the fact that antifolate antagonists have indeed proved valuable in the treatment of meningeal leukemia.

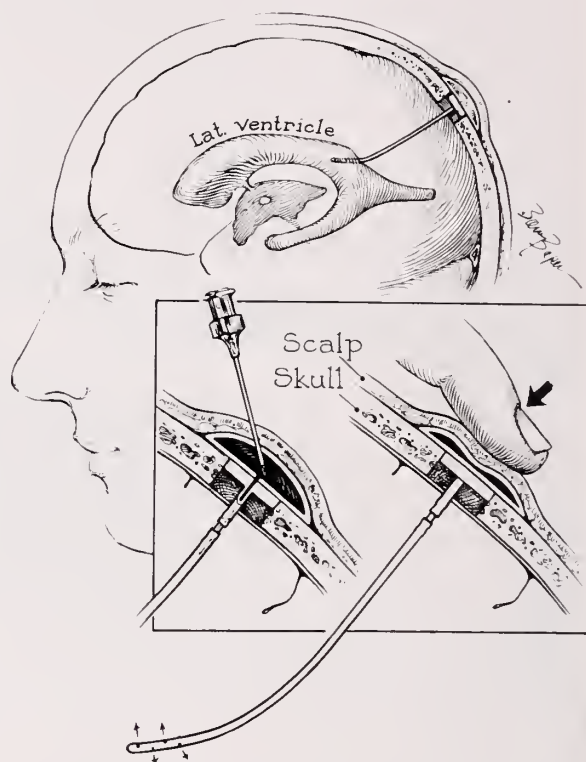


FIG. 1. Subcutaneous CSF reservoir and pump with method of puncture by hypodermic needle.

Technique of Pump Placement and Perfusion

The selection of sites for placing 1 or more of the CSF reservoirs and pumps is determined by the situation of the tumor. The guiding principles are illustrated in figure 2, which is a schematic of the varieties of perfusion arrangements that have been used. It is to be noted that for infratentorial tumors, perfusion from a lateral ventricle to the lumbar subarachnoid space is the best arrangement. The surgical technique for pump installation and injection has been described in a previous publication,³ and the only additional points to be made for perfusion therapy are as follows: When perfusing from 1 pump

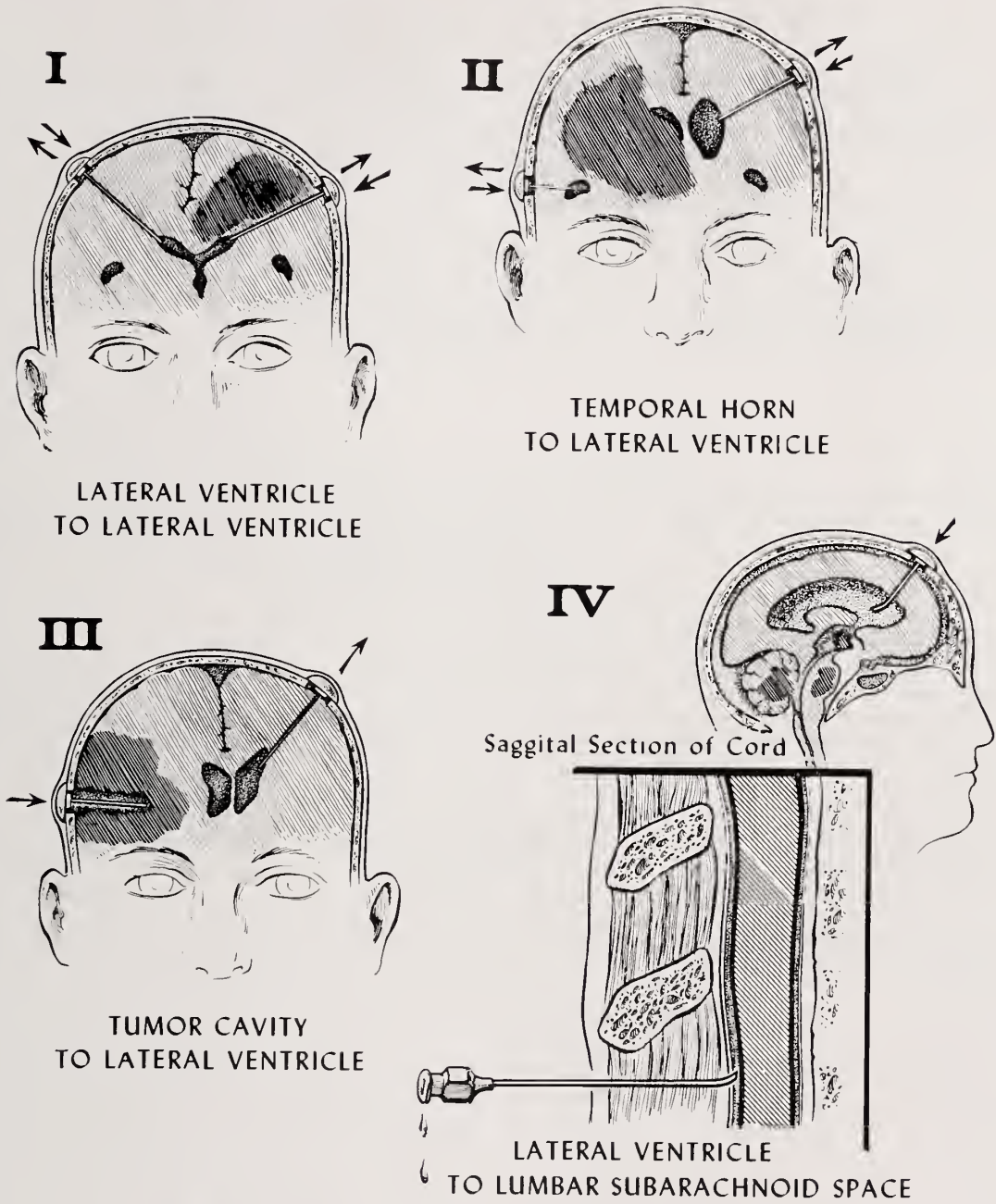


FIG. 2. Four methods of perfusing gliomas by varied placement of CSF reservoirs and/or lumbar catheter. Supratentorial tumors (excluding third ventricular tumors) are treated by methods I, II, and III; infratentorial and third ventricular tumors, by method IV.

to another or to the lumbar space it is best to use a short (2 cm.) no. 25 or 26 needle which, when placed obliquely, can be driven to the needle head and taped in place. The lumbar exit for the perfusate is best handled by a fine catheter introduced through a lumbar puncture needle which is then withdrawn, leaving the catheter in place. The reservoir containing the perfusate can be suspended on an intravenous pole at any height suitable to perfusion by the force of gravity so

that the exit pressure does not exceed 150–200 mm. H₂O.

Six patients with gliomas have received this treatment to date. Pertinent details of these cases are summarized in table 1.

Comment

As can be seen from table 1, it is as yet too early to comment on the therapeutic results of

TABLE 1: Pertinent Data on Six Patients with CSF Perfusion

Tumor Type	No. of Perfusions	Immediate Effect	Follow-up and Result
1. Glioblastoma multiforme, diagnosed 4 months before perfusion	4	Moderate transient improvement in neurologic state	Rapid deterioration after fourth perfusion and death in 4 months after first perfusion. Autopsy revealed extensive glioblastoma multiforme with fibrosarcomatous changes.
2. Pontine glioma (glioblastoma multiforme), diagnosed 1 month before perfusion therapy	5	Dramatic alleviation of quadriplegia and bulbar palsy lasting 3 months	Rapid deterioration 3½ months after fourth perfusion. No change after fifth perfusion. Death 6 months after initial diagnosis. Autopsy showed extensive glioblastoma multiforme.
3. Astrocytoma (grade II), diagnosed 2 years before perfusion therapy	4	Definite improvement in neurologic deficit, viz., memory defect and intellectual impairment. Improvement persists to date.	Patient remains well at improved level with no further deterioration 6 months after last perfusion.
4. Glioblastoma multiforme intracranial calcification of tumor site 5 years. Tissue diagnosis made 2 weeks before onset of perfusion therapy.	4	No significant change	Following post-perfusion check angiography patient developed hemiplegia and aphasia which are now improving. No further deterioration 2 months after last perfusion.
5. Glioblastoma multiforme. Initial diagnosis of brain tumor suspected 6 years before first perfusion.	4	Moderate improvement in neurologic state	Moderate improvement persists 1 month after last perfusion.
6. Glioblastoma multiforme lesion suspected 1½ years before first perfusion	5	No significant change	Patient now 2 weeks after last perfusion

this method of treatment. Only time will tell if these lesions are being appreciably influenced, let alone being cured. What is obvious is that we do not know what is the best drug to use in such cases. Much experimental work with experimental brain tumors in animals and with clinical trials of the type outlined here remains to be done. What has been demonstrated is that the technique is practical, easy to perform, not unduly disturbing or hazardous to the patient, and associated with minimal side-effects in the 6 patients we have so far treated. It is hoped that we shall be able to give this treatment to more patients in the hope of alleviating them from the invariable sentence of death that is imposed by this disease.

Summary

A new approach to the treatment of inoperable

gliomas of the nervous system by means of CSF perfusion of cytotoxic agents via chronic subcutaneous pumps has been described. The immediate results in 6 patients have been summarized.

We are extremely grateful for the unfailing encouragement and helpful advice given to us by Dr. Maitland Baldwin, Dr. Charles G. Zubrod, and Dr. Nathaniel I. Berlin.

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Serum Proteins and the Gastrointestinal Tract

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THE SMALL INTESTINE makes a number of significant contributions to the formation and degradation of serum proteins. Several of the contributions were considered in a previous review.¹ We shall summarize them briefly and then dwell mainly on the exudation of serum proteins into the lumen of the gastrointestinal tract in health and disease.

Although we regard the intestinal mucosa as responsible for the absorption of the products of the digestion of proteins, under certain circumstances it can absorb proteins intact. For example, antibodies are absorbed during the neonatal period by some animals.¹ In the suckling rat such ability to absorb whole protein declines sharply approximately at the age of 18 days. Adrenocorticosteroids administered before this time induce a premature loss of the small intestine's ability to absorb proteins. Traces of this ability may persist into adult life, but not as an important factor in protein metabolism.

The mucosa of the small intestine contributes to the regulation of protein synthesis by influencing the absorption of dietary amino-acids needed for this synthetic activity. The mucosa possesses as yet incompletely elucidated mechanisms for moving amino-acids against a concentration gradient. These mechanisms require energy derived from aerobic metabolism; they are selective and give preference to the L-forms of the amino-acids in contrast to the D-forms; their activity varies from one region of the small intestine to another with the greatest activity usually occurring in the distal half of the small intestine.² These mechanisms presumably endow the normal absorptive process with regulatory capacities for discrimination among amino-acids. The mechanisms may be disrupted as a result of genetic defects, as in Hartnup disease or cysti-

nuria, or they may be impaired by acquired intestinal disease.

The mucosa of the small intestine participates directly in protein synthesis. After the intravenous injection of isotopically-labeled amino-acids the most active incorporation of isotope into tissue protein takes place in the mucosa of the small intestine.³ The intestinal mucosa is rich in plasma cells which synthesize gamma globulin. Lipids absorbed by the intestinal mucosa undergo biochemical modifications and ultimately appear as lipoproteins in the lymph, in intimate relation to specific protein moieties. The mucosa of the small intestine not only attaches the lipids to these proteins, but it also appears capable of synthesizing the proteins.⁴

Finally, the mucosa of the small intestine takes part in protein metabolism in that, normally, a portion of the serum proteins leaves the circulation daily and enters the lumen of the gastrointestinal tract where it is degraded. In patients with diseases of the gastrointestinal tract such loss or exudation of serum protein and its subsequent catabolism may increase to such an extent that they contribute significantly to the development of hypoproteinemia. This concept was first suggested by Moschowitz,⁵ purely on clinical grounds. Subsequently Albright et al⁶ by means of a complex balance technique described below obtained evidence showing that excessive catabolism, rather than defective synthesis, could explain the hypoalbuminemia of a patient with idiopathic hypoalbuminemia. However, their experimental approach could not demonstrate the site of the excessive catabolism. This demonstration was provided by Citrin et al,⁷ who showed that a patient with giant gastric rugal hypertrophy and associated hypoalbuminemia lost excessive amounts of intravenously injected I¹³¹-albu-

min into his gastric juice. This proved that excessive albumin catabolism could be due to protein loss into the gastrointestinal tract. Subsequently, Gordon and his associates,^{8, 9} Holman et al.,¹⁰ and Schwartz and Jarnum¹¹ showed that hypoproteinemia in the absence of clinically apparent gastrointestinal disease could be due nonetheless to excessive loss of macromolecules into the gastrointestinal tract. Other investigations based on immunodiffusion studies revealed that the gastrointestinal secretions of normal individuals contain all of the serum proteins.^{10, 12}

These and other related observations led to the following formulation of the pathologic physiology of protein-losing gastroenteropathy. Normally there is a slow ooze of serum proteins into various regions of the gastrointestinal tract. Localized or diffuse disease of this tract can increase the exudation to such an extent that as much as 70 per cent of the circulating plasma proteins may be lost into the gastrointestinal tract every 24 hours. This severe drain on the body's protein stores may continue for years. As yet no one knows the mechanism of the gastrointestinal protein loss in normal subjects or whether a pathologic increase in the loss results from an exaggeration of the normal process or from a different mechanism. Digestive enzymes degrade the serum proteins which have exuded into the lumen of the gut. Their constituent amino-acids are reabsorbed unless the disease underlying the excessive exudation has also impaired intestinal amino-acid absorption. In the presence of pancreatic insufficiency, when intestinal digestion of the exuded serum proteins is impaired, or in the presence of disease of the distal regions of the gastrointestinal tract, exuded proteins may be lost into the stools relatively intact.

In most cases of exudative gastroenteropathy the amino-acids derived from the lost proteins are reabsorbed and made available to the body for resynthesis of protein. Hypoproteinemia develops if the rate of loss of a protein exceeds the body's capacity to synthesize that protein. Thus, the body can accelerate albumin synthesis only about 2-fold, and so hypoalbuminemia occurs commonly in protein-losing gastroenteropathy. Hypoproteinemia develops also if the rate of synthesis of an exuded protein is not regulated by the concentration of that protein in the serum, as is the case with gamma globulin, the serum concentration of which also is commonly reduced in these patients.

Although protein loss into the gastrointestinal tract resembles proteinuria in its pathophysiology, quantitative estimation of gastrointestinal

protein loss is more complicated because the protein is not excreted in the feces but is catabolized and its products are largely reabsorbed. Thus, a determination of a patient's nitrogen balance is neither an adequate test for, nor a measure of, gastrointestinal protein loss. Intubation of the gastrointestinal tract and electrophoretic and immunochemical studies of the proteins in its contents have been of value in detecting but not in quantitating gastrointestinal protein loss because collections may be incomplete and because digestion may occur to a variable degree.^{10, 12}

A determination of the fate of macromolecules injected into the circulation provides a quantitative approach to the problem. Albright et al.¹⁶ administered unlabeled human serum albumin intravenously into a patient with idiopathic hypoalbuminemia. In an attempt to determine the fate of the injected albumin by means of metabolic balance techniques, they proposed that the albumin that was burned or catabolized would be reflected in the increase in nitrogen excretion over control values; the albumin that was converted to, or incorporated into, proteins following its catabolism could be estimated from phosphorus retained in excess of calcium retained; and the difference between injected albumin and the sum of the amounts burned and converted was the unchanged albumin retained in the body. This ingenious but laborious approach permitted them to demonstrate for the first time that idiopathic hypoalbuminemia could be attributed to excessive burning or catabolism. Subsequent studies have revealed, however, that inherent inaccuracies in the fundamental assumptions of this technique can result in an erroneously normal value for albumin catabolism in a patient with known severe gastrointestinal protein loss.¹³ Moreover, the technique can only indicate that catabolism is excessive, but it cannot reveal where the catabolism takes place.

The use of isotopically-labeled macromolecules results in a more accurate determination of protein catabolism.^{14, 15} In one approach, now used relatively routinely, the protein under study, labeled with I^{131} , is injected intravascularly. The I^{131} subsequently present in blood, urine and stools is measured, and one calculates from these values the plasma volume, the total amount of the protein in the body, the half-time of the survival of the injected labeled protein, and the fraction of the protein's intravascular pool catabolized per day. If the subject under study is in a steady state, the rate of protein synthesis may also be calculated. In the presence of excessive

loss of the protein into the gastrointestinal tract, the values for the total amount of the protein in the body and for the survival half-time are decreased below normal. The rate of synthesis is usually normal or slightly increased, but it may be depressed in the presence of malabsorption, liver disease, or chronic inflammatory disease.^{9, 14} This technique has been used in studies of metabolism of albumin, gamma globulin, gamma macroglobulin, fibrinogen, transferrin, and orosomucoid. Although the results can reveal excessive catabolism of a protein, the technique cannot provide direct evidence that the excessive catabolism is due to excessive protein loss into the gut, because after the proteins are lost into the gut their label is removed and the I^{131} is reabsorbed and not excreted quantitatively in the stool. In an effort to trap liberated I^{131} within the lumen of the gastrointestinal tract, and thereby to obtain quantitative measurements of protein loss into the gut, Jeejeebhoy and Coghill¹⁶ fed an ion exchange resin during studies of the turnover of I^{131} -labeled protein. Several faults in this approach limit its value. Trapping of enteric I^{131} by fed resin is incomplete.¹⁷ Catabolism of the labeled protein outside the gastrointestinal tract liberates I^{131} which in turn is secreted into the gastrointestinal tract by the salivary and gastric glands.^{17, 18} One cannot differentiate iodine entering the gut for this reason from iodine entering because of excessive protein leak.

To circumvent the problems involved in using I^{131} -labeled proteins for studies of protein catabolism, Gordon⁸ introduced I^{131} -PVP (polyvinylpyrrolidone). This polymer can be prepared so that its average molecular weight approximates that of serum albumin. It is not degraded by mammalian or bacterial enzymes, and it is usually poorly absorbed from the gastrointestinal tract. When it was injected intravenously into subjects without excessive gastrointestinal protein loss less than 1.5 per cent of the administered dose appeared in the stools passed during the next 4 days, but a much greater percentage appeared in the stools of patients with exudative gastroenteropathy. By means of this technique Gordon was able to obtain highly suggestive evidence that idiopathic hypoalbuminemia can be due to excessive loss of macromolecules into the gastrointestinal tract. Although I^{131} -PVP has proven useful for detecting this abnormality it is subject to several criticisms. PVP is not a naturally-occurring serum protein but rather a polymer with a wide spectrum of molecular weights; its survival in the blood is strikingly shorter than that of most se-

rum proteins, and the strength of its attachment to I^{131} varies so that, depending on the nature of the particular preparation, a significant and variable amount, 10 to 64 per cent, of the label on PVP that enters the gut can be broken off and reabsorbed.

Human serum albumin labeled with chromium⁵¹ appears to be a more satisfactory compound for studies of exudative gastroenteropathy.^{18, 19} It resembles native serum albumin. The Cr^{51} label is neither absorbed from, nor secreted into, the gastrointestinal tract. Following the feeding of Cr^{51} -albumin to human subjects, 93 to 98 per cent of the dose appeared in the stools. When it was injected intravenously into subjects without exudative gastroenteropathy less than 0.5 per cent appeared in the stools, whereas patients with this pathology excreted 2 to 40 per cent of the injected dose in their stools. Despite its virtues, Cr^{51} -albumin cannot be used to determine albumin turnover because the chromium label is gradually eluted from the injected Cr^{51} -albumin, and the apparent survival of the protein is thus artificially shortened. If Cr^{51} -albumin and I^{125} -albumin are injected simultaneously one can determine not only the indices of albumin metabolism described for studies with I^{131} -albumin and Cr^{51} -albumin individually, but also the fraction of the albumin catabolized daily by the body that is lost into the gastrointestinal tract. This combined technique appears at present to be the method of choice for evaluating the contribution of the gastrointestinal tract to the metabolism of serum proteins.

A typical patient with exudative gastroenteropathy will have low serum concentrations of albumin, gamma globulin and transferrin. The concentrations of fibrinogen and of total alpha- and beta-globulins in the serum will be normal. The clinical conditions producing excessive protein loss include such gastric disorders as carcinoma, giant rugal hypertrophy, and inflammation; such small bowel disorders as regional enteritis, celiac disease, Whipple's intestinal lipodystrophy, neoplasm, vascular insufficiency, and intestinal lymphangiectasia; such large bowel diseases as ulcerative colitis, Hirschsprung's disease, and tumor; and diseases outside the gastrointestinal tract such as constrictive pericarditis and congestive heart failure.^{14, 15}

To conclude, we will present the application of several of the described techniques to the study of a 12-year-old boy who was underdeveloped, malnourished and critically ill with diarrhea, abdominal pain, fever and edema. We found that he

had inflammatory disease of his small and large intestines, consistent with ileocolitis. Laboratory examination revealed iron-deficiency anemia and leukocytosis. His serum albumin concentration was reduced to 1.2 Gm. per 100 ml. and the serum gamma globulin concentration was reduced to 200 mg. per 100 ml. We explored the cause of his hypoalbuminemia by administering I^{131} -albumin and I^{131} -PVP intravenously in separate studies.

globulin, with an associated impairment of albumin synthesis. However, a study of this child's gamma globulin metabolism revealed the situation to be more complex. Following therapy, when the patient's concentration of albumin in the serum had risen considerably, the gamma globulin concentration was still abnormally low, 150 mg. per 100 ml. A post-treatment study of gamma globulin turnover with I^{131} -gamma globulin re-

TABLE 1: Albumin Metabolism Studies in a Twelve-year-old Boy*

Subjects	Albumin Metabolism				¹³¹ I-PVP 4-day Fecal Excretion
	Serum Albumin	Total Body Albumin	Albumin Catabolism		
			¹³¹ I-Albumin Survival t _{1/2}	Albumin Turnover (Synthesis)	
	<i>g/100 ml.</i> (a)	<i>g/kg.</i> (b)	<i>days</i> (c)	<i>g/kg./day</i> (d)	<i>Per cent of injected dose</i> (e)
Controls (10)	3.7-4.6	3.7-4.7	13-20	0.16-0.20	0-0.8
Patient with ileocolitis					
Relapse	1.4	1.3	7.2	0.11	5.0
After treatment	3.3	3.6	11.0	0.23	1.3

* These data have been published previously.²⁰

The data in table 1 showed that when he was in relapse his total body albumin pool (column b) was approximately 30 per cent of normal, thus indicating that the low concentration of albumin in the serum (column a) was not due to hemodilution but to actual deficiency of albumin. The half-time of survival of the injected I^{131} -albumin was reduced to 7.2 days (column c), indicating excessive catabolism of albumin. The recovery of I^{131} in the stools following the injection of I^{131} -PVP was 5.0 per cent of the injected dose (column e), which is greater than normal and which suggests that excessive loss of albumin into the gastrointestinal tract contributed to the excessive albumin catabolism. Finally, the estimation of the rate of albumin synthesis, 0.11 g/kg./day (column d), was significantly lower than normal, a finding which we attributed to the child's chronic disease. After he was treated with ACTH and Prednisolone® the patient improved, his diarrhea and toxicity subsided, his serum albumin concentration (column a) rose to 3.3 Gm. per 100 ml., and studies of albumin metabolism were repeated (table 1). The results suggested that the exudative enteropathy had largely subsided (columns c and e) and that the rate of albumin synthesis had returned to normal (column d).

To this point the case would appear to be one of inflammatory disease of the gut, causing excessive intestinal loss of serum albumin and gamma

vealed the synthetic rate of that serum protein to be approximately 10 per cent of normal. Thus, the hypogammaglobulinemia was not due only to exudative enteropathy but also, and probably primarily, to impaired synthesis.²⁰ We will now reveal that the patient's past history was entirely consistent with the diagnosis of congenital hypogammaglobulinemia and that the bowel disease was probably superimposed upon this condition. Although therapy reversed the exudative enteropathy and permitted albumin metabolism to return to normal it did not affect the underlying disturbance of gamma globulin synthesis.

In summary, the gastrointestinal tract participates in the metabolism of serum proteins by virtue of its absorptive, biosynthetic and exudative activities. Enhanced protein exudation into the lumen of the gastrointestinal tract produces major changes in the concentrations of proteins in the serum and affects albumin and gamma globulin in particular.

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Dental Caries as a Major Disease Problem

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IN THE UNITED STATES fewer than 5 persons in 100 have not experienced dental caries. This disease has been reported by the National Health Survey to be the most common physical defect of children. On the basis of the best current estimates Americans have something like 700 million untreated cavities, and in most communities the annual increment of new lesions is many times the rate of repair. In any given year only about 40 per cent of the population visits a dentist. These facts make it evident that there exists an imperative need to find effective methods for the control and prevention of this disease.

Before this can be accomplished it is first necessary to understand the etiology of dental caries. In spite of the fact that bacteria have been thought to be etiologically important for at least 100 years, the causative microorganisms and the nature of their pathogenicity in humans are still unknown. The primary reason for this lies in the complexity of the oral microflora which has made it virtually impossible to determine which of the myriads of microbes present in the lesion of dental caries has been responsible for the initiation and development of the disease. Moreover, dental caries is a multifactorial disease in which diet, microorganisms, and host resistance each play an essential part.¹

This can be illustrated by the schema shown in figure 1 in which the interacting components of the disease are represented by interlocked circles to show that only in the situation where all contributory factors are acting in coincidence will caries occur. Much of the information which has led to the formulation of this schema has been derived from animal experimentation. However, there are sufficient points of similarity to clinical observations and case experiences to indicate that the same relationships apply to the disease as seen in humans.

While a discussion in depth of these 3 groups of

interacting disease components is beyond the scope of the present article a few examples are offered as illustrations.

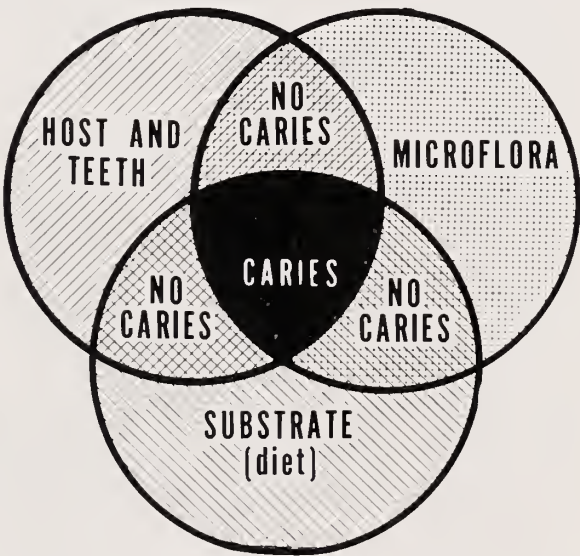


FIG. 1. Diagrammatic representation of factors which are involved in caries causation. All factors must be operative before caries will develop.

Dietary factors. Caries seldom is a problem when sugar consumption is low. In the occupied countries of Europe during World War II caries rates dropped markedly with sugar restriction, although starchy carbohydrate foods made up a considerable portion of the dietary intake. In animal experiments sucrose is associated with more active caries than glucose.² The frequency of carbohydrate intake is also a critical factor. Experimental findings in both animals and humans indicate that fairly large amounts of sugar consumed at mealtime may actually be less cariogenic than small amounts eaten frequently during the day.^{3, 4} Liquid diets usually favor less decay than dry diets of the same carbohydrate content.

Host factors. Under this heading can be listed

such things as genetic influences which control tooth morphology; tooth resistance, such as is conferred by fluorides; physiologic factors, such as salivary flow rate and buffering capacity; and even psychologic traits which may affect the desire for sweets or the pattern of eating habits.

Microflora. Orland et al.⁵ demonstrated the essential role of microorganisms in dental caries when they showed that rats of a caries-susceptible strain did not develop the disease when reared and maintained free of any living microorganisms, even if they were provided with a diet with a high caries-conducive potential. Monoinfection of these germ-free rats with a single streptococcal strain resulted in the development of carious lesions.⁶ These findings have been confirmed and extended by Fitzgerald et al.^{7, 8} It is now known that this pathodontic potential is not present in all acidogenic microorganisms which inhabit the oral cavity, but that it seems to be confined to a relatively few types of streptococci and lactobacilli.^{9, 10}

Paralleling these findings with rats was the observation by Keyes,¹¹ that a strain of albino hamsters which had been subjected to antibiotic treatment apparently lost its susceptibility to caries. Progeny of the antibiotic-treated parents remained caries-free for many generations even when subjected to the challenge of diets high in sucrose. However, if the caries-inactive hamsters were caged with a caries-active hamster they rapidly developed rampant decay (figure 2-A and B).¹¹ Furthermore, the progeny of the "exposed" or infected animals continued to develop the disease while the progeny of unexposed animals continued to remain caries-free unless they in turn were singularly exposed. It was not necessary that animals be kept in close contact to transmit the disease from one to another; the infection could also be induced by inoculating animals orally with some of the bacterial plaque from a carious lesion or even with feces from active animals.^{11, 12} Because of the coprophagous habits of most rodents it seems likely that this is one of the major factors in the transmission of this disease from animal to animal.

Fitzgerald and Keyes¹³ eventually isolated from a carious lesion in a hamster a specific streptococcus which was able to induce caries when inoculated orally into hamsters which did not harbor microorganisms. Moreover, when they "labeled" this strain by making it resistant to streptomycin they were able to follow the course of the infection by culturing samples on agar plates containing enough streptomycin to inhibit

the rest of the oral microorganisms. With this technique it could be shown that odontopathic streptococci became implanted in the oral cavity and intestinal tract of hamsters, that they grew in plaque-like masses on the surfaces of the teeth, that they could be isolated from carious lesions and intestinal contents of infected hamsters, and that they could be transmitted to uninfected hamsters caged with infected animals, where they induced carious lesions and could in turn be recovered from lesions or intestinal contents of the

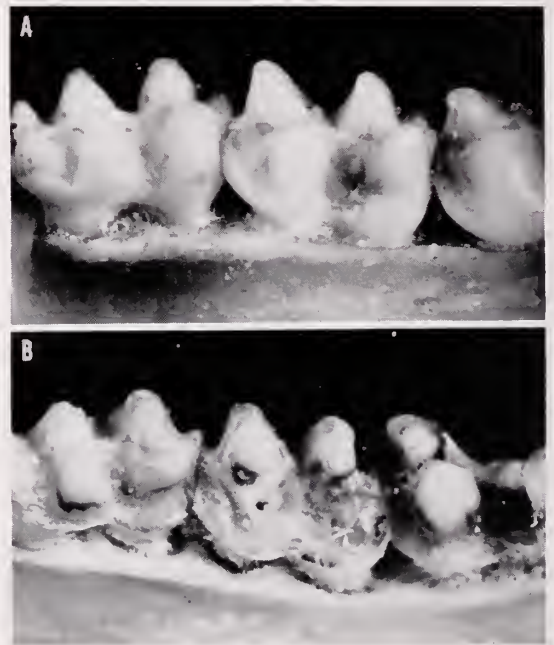


FIG. 2. (A) Molar dentition of a hamster which does not harbor a caries-conducive microflora. (B) Molar dentition of a littermate of the animal shown in figure 2-A which was housed with a caries-active hamster. Both animals received the same diet for 42 days starting at weaning.

exposed animals. The sequence of these studies is shown in figure 3.

It was also noted that in the hamster, as with the rat, only a relatively few types of streptococci were associated with cavity formation. Moreover, there was very little cross-susceptibility of the rats to the hamster organisms or vice versa.¹⁴

These experiments have shown that under the appropriate conditions in experimental animals dental caries is an infectious, transmissible disease associated with relatively few types of microorganisms, and that there may be a considerable degree of host-specificity in the ability of these organisms to induce the disease.

The term "appropriate conditions" is to be interpreted in the light of the condition diagramed

in figure 1. That is to say, unless the combination of susceptible host, a caries-conducive diet, and a pathogenic microflora is simultaneously operative the disease does not develop.

Caries control. In experimental animals caries may be controlled by interrupting any of the interacting factors. If sucrose is eliminated from the diets caries-activity decreases markedly even though the cariogenic streptococci can be shown to be present.² If fluoride is administered in the drinking water or topically applied, the teeth are protected even in the presence of a highly caries-conducive diet and microflora.¹⁵ Finally, if such a microflora is absent, as in the case of germ-free animals, or eliminated by antibacterial agents, caries does not develop.

humans is the speed with which the disease progresses in the animals.

One can say in general that most of the factors which tend to inhibit or to potentiate caries activity in experimental animals have a similar effect on human disease (e.g., sugar, frequency of eating, fluorides, salivary flow rate). The micro-organisms which are responsible for caries in humans have not been specifically identified, but the fact that caries activity in humans can be affected by antibiotics like penicillin^{16, 17} signifies that human caries is also a bacterial disease and amenable to control by antibacterial agents.

Of particular interest are recent reports by Zimmer and his co-workers^{18, 19} who used fluorescent antisera to a caries-conducive rat⁷ and ham-

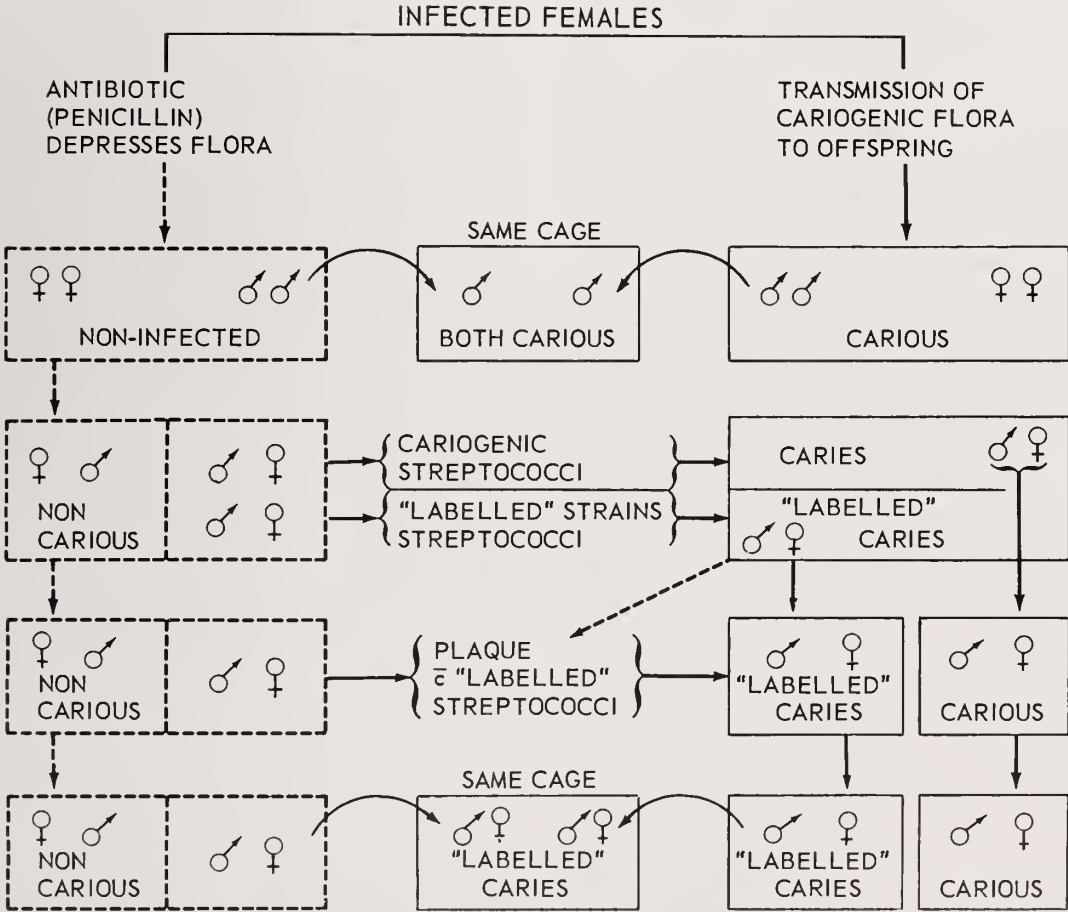


FIG. 3. Diagram of experiments which demonstrated the transmissible nature of dental caries.

Relationship to human caries. The question then arises as to how closely the disease and its contributory factors in animals parallel human caries. As far as diseased tissue is concerned there is a close resemblance grossly and histologically. The major difference between the disease produced in laboratory animals and that seen in

ster streptococcus¹³ to isolate antigenically similar streptococci from human caries lesions and showed that some of these organisms could induce caries in hamsters¹⁸ or rats.¹⁹ While the role of these organisms in human disease still remains to be determined, these findings offer some exciting new possibilities to the study of this problem and will undoubtedly be vigorously pursued.

One possibility that immediately comes to mind is the development of a vaccine which would confer immunity to dental caries. However, in the limited work that has been done with animals, attempts to protect against caries by the use of vaccines or by immune rabbit antisera have not been successful.²⁰ One explanation for these results may lie with the difficulty of obtaining high salivary levels of antibody to such organisms.

Even though the precise organisms have not yet been fully identified there have been several attempts to "control" caries by the use of chemotherapeutic dentifrices or mouth washes.²¹ Furthermore, Littleton¹⁷ reported that children receiving penicillin prophylactically for rheumatic fever had less caries than a matched group of controls. However, systemic administration of most chemotherapeutic agents is not a very practicable method of getting adequate concentrations in the oral cavity. On the other hand, the use of chemotherapeutic agents in mouth washes and dentifrices is subject to the disadvantage that the exposure time of the microflora to the drug is extremely limited. Stralfors²² and Hori and Keyes²³ have proposed the use of a plastic device similar to the tooth guards used by athletes, by means of which antibacterial and other agents may be directly applied to the dentition. Such devices are already undergoing trials for the application of fluoride to the teeth of children, and they could also be used to obtain relatively high concentrations of antibiotics in the bacterial plaques at the surface of the teeth with the use of very small amounts of the drugs. In addition, they possess the advantage that they may be worn with comfort for extended periods of time, thus insuring adequate exposure of the dental flora to the agent while the remainder of the normal oral flora would be relatively unaffected. Another possibility would be the use of slowly dissolving troches containing an antibacterial agent.

At the present stage of our knowledge it would be undesirable to recommend widespread unsupervised use of most antibiotics for caries control. However, the antibacterial approach may be of value for the clinician responsible for treating handicapped individuals or faced with a case of rampant caries in which, as frequently happens, all attempts to rehabilitate the dentition by filling open lesions fails because the restored areas rapidly break down with new lesions. The use of antibiotics in a device like the plastic mouthpiece would offer a practical method of rapidly arresting the progress of the disease while other supportive treatment is being instituted. The other

supportive measures might well include, in addition to a program of proper oral hygiene, the application of fluorides to increase the resistance of the teeth, the institution of a dietary regimen which would exclude excessive carbohydrates and the elimination of frequent between-meal snacks, especially of sweets. It is conceivable that highly effective antibacterial agents specifically intended for use in the control of caries will be developed. Ideally, they would have such properties as specificity of action and freedom from allergenic effects and the induction of drug-resistance. The agents should also have a minimal effect on the normal microflora.

Is Dental Caries an Infectious Disease in Humans?

There is little direct evidence which would help to answer this question. In the United States, however, caries is so widespread that the question is academic. At present in our society caries can be considered as an endemic disease with an extremely high morbidity rate. In other areas of the world, especially primitive regions, caries incidence has increased in direct relationship to the incursion of civilizing influences. The advent of the white man and his foodstuffs has already been followed by rampant caries in the children of the Alaskan Eskimos and in the natives of the South Sea Islands, as well as those in newly civilized areas of South America and Africa. To the epidemiologists the pattern of spread of the disease in these regions has the characteristics of a contagious disease with a high morbidity rate. Whether this is due solely to the availability of caries-conducive foodstuffs or also to the introduction of a specific microflora would be well worth studying because it would be important to know if these people normally harbor the pathodontic microorganisms.

Can Dental Caries be Eliminated?

Caries can eventually be eliminated if it is recognized as a widespread disease problem and approached accordingly. This means that there should be attacks on all of the contributory factors which are responsible for its existence and its dissemination. Ideally, the resistance of the teeth to decay should be improved by fluorides or any other means available, dietary habits should be corrected to reduce excessive or frequent consumption of cariogenic foodstuffs, and, finally, a vigorous attempt must be made to find and eradicate the causative microorganisms. Only when all of these factors are brought under control can we

expect to see the end of this disease as a widespread health problem.

Summary

Dental caries is the most widespread physical defect of children and affects about 95 per cent of the population in the United States. Experimental evidence indicates that caries in humans is a multifactorial disease in which the susceptibility of the host, the diet, and some as yet unidentified microorganisms are essential components. Elimination of caries will become practicable only when its multifactorial nature is recognized and preventive measures instituted against all of the contributing factors.

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A Community-oriented Therapeutic Milieu*

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IN THIS PAPER we shall describe an experimental therapeutic milieu now in its fourth year of operation designed for the long-term treatment of schizophrenic and other severely disturbed psychiatric patients. This therapeutic community is housed on 1 of 4 inpatient psychiatric nursing units at the Clinical Center of the National Institutes of Health. The treatment is conceived of as occurring in the social interaction between the patient and the total culture of the therapeutic community. This general concept of treatment derives from the work of several authors,^{1, 2, 3} but many aspects of this particular milieu are experimental and differ from other attempts at social therapy. These unique aspects will be stressed in this report. Of particular note is the attempt to provide a milieu therapy in "pure culture." There is no individual psychotherapy, and no somatic therapies are employed except ataractic drugs, the use of which is kept to a minimum.

Theoretical Background: Concepts of the Dynamics of Psychosis

The rationale for many aspects of the treatment program will be better understood if certain underlying assumptions concerning the precipitation and perpetuation of psychoses are presented. One of the fundamental hypotheses is that psychoses and other severe psychiatric disturbances occur in the context of an "identity crisis."^{4, 5} Faced with the task of dealing with new life situ-

ations, the ego must undergo a maturational step and change its perception of itself and its relations to objects in the external world. Repeatedly during life at times such as adolescence, separation from the parental family, marriage, graduation from school, and changes in the occupational and familial constellation, new roles must be assumed. Various constitutional factors as well as patterns of interaction fostered in the family may make it difficult to learn these new roles and consequently predispose to psychosis. In a sense the development of chronic psychosis represents a solution to the problem posed by the identity crisis in that a new identity or role is assumed, namely, that of a sick patient or dependent individual who uses infantile patterns of coping with the world. This "resolution" not only occurs intrapsychically in terms of thought disorder and delusion formation but also finds representation in the way one establishes himself in relation to the external social structure and to the family. Moreover, the psychosis obviates the need to assume responsible roles with their attendant stresses and may be reinforced and maintained by considerable secondary gain.

The task of this particular therapeutic community is defined by the characteristics of a group of patients whose mode of confronting life tends to result in a chronic, dependent, hospitalized and nonfunctioning role (so well described by Goffman⁶ and others under the rubric of the "Moral Career of the Mental Patient"). The goal of treatment is reengagement with the "adult" world and the assumption of a functioning position in the community. The identity crisis may then be gradually resolved in a less pathologic manner, through assimilation and incorporation of the new identity required by living in a functional capac-

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ity. The therapeutic milieu must serve in a sense as a substitute family and "interpersonal arena" through which the patient may approach a new self-concept. At the same time the treatment must attempt to alter the interactions within the natural family which are pathogenic and tend to perpetuate the chronic, sick role of the patient.

The Therapeutic Community

The Staff. The staff consists of 2 psychiatrists, a psychiatric social worker, a vocational and recreational counsellor, a head nurse, 5 registered nurses, and 6 nursing assistants. The nursing staff works in 3 shifts (day, evening and night). One of the psychiatrists, the unit administrator, functions as the leader of the treatment team and occupies that position for 1 year following 2 to 3 years of psychiatric residency. He coordinates the activities of various staff members, acts as leader at most of the group meetings, and makes medical and administrative decisions concerning patient care. He is under the supervision of a senior research psychiatrist who works with successive unit administrators to maintain consistent therapeutic goals and values. The nursing staff functions to provide the major portion of direct personal interaction with the patients, implementing treatment policies, managing disturbed behavior, and performing the usual administrative and data-collecting activities associated with running a hospital unit. The social worker has a special area of responsibility in regard to patients' families; and the vocational and recreational counsellor has a special area concerning liaison between the patients and the outside community. Although traditional hierarchical lines are respected, an emphasis is placed on each staff member being part of the therapeutic team, dealing with patients on a person-to-person basis, and feeling free to offer suggestions and take initiative in the overall treatment. Especially impressive has been the ability of nurses and nursing assistants to engage in a productive and insightful way with psychiatric patients.

The Patients. About 2 patients per month are admitted to the unit. They are referred from many sources within the community, including St. Elizabeths Hospital, D. C. General Hospital, the various private psychiatric units in general hospitals, and psychiatrists and general practitioners. Patients between the ages of 15 and 60 are admitted irrespective of race, sex, or social class. The most typical referral, however, is a white young adult from a middle-class family in the

D. C. area. All admitted are severely ill and require psychiatric hospitalization; some are transferred from other psychiatric hospitals. The census of the unit tends to run between 20 and 25 patients. Virtually all patients begin treatment as inpatients and continue the same milieu activities even following discharge to outpatient status. At any one time only about 50 or 60 per cent of the patients are sleeping in at all, and, of those, about $\frac{1}{2}$ sleep out a part of the time. It is unusual to have more than 3 or 4 patients who are not off the unit and in the community-at-large for a major portion of each day.

Physical Environment. The unit is housed on one of 24 almost identical nursing units within the red brick monolith known as the Clinical Center. The architecture and the general atmosphere belie the philosophy of the unit. The appearance is that of an enclosed, protected "ivory tower" of medical research with sealed windows, carefully regulated temperature control, and little communication with the outside world. In striking contrast is the concept that the nursing unit, in free and open communication with the larger community, serves as a base from which patients work on constructing roles for themselves in the "real world." Just as in one sense the staff serves as an extended family while patients build such roles for themselves, so the unit serves as a temporary home. To facilitate this, the Day Room has become the "heart" of the unit. It is furnished like a living room, and it is there that the interactional life of the unit for the most part transpires.

The Structuring of Time. In terms of formal time-structuring the unit operates in a fashion which might be described as an "evening hospital." Group interactions involving the entire patient group begin generally at 5:30 p.m. and continue until 10:00 p.m. At 5:30, 4 evenings a week, a meeting of all the patients (inpatients and outpatients) and staff is held, and on 2 of those days all the primary family members attend as well. These patient-staff meetings number in attendance approximately 25 to 30 people and the combined patient-staff-family meetings, approximately 50 to 60. These meetings are conducted by the unit psychiatrists. The group meetings are viewed not as constituting the therapy but rather as part of the total complex milieu. Following dinner the patients reconvene in the Day Room, and the time until around 10:00 p.m. is spent in discussions under the leadership of the evening nursing staff and nursing assistants. Outpatients

usually leave around 10:00 p.m., and the remaining time may be spent with inpatients. The structure of the evening's activities is quite flexible. On some occasions all may sit in one group in a discussion that has a structured quality resembling a patient-staff meeting. At other times staff may be talking with individual patients or several small groups of individuals. At still other times the group's efforts may be concentrated on gaining contact with or controlling the behavior of a severely disturbed patient. All patients are expected to attend each evening, but allowances are made for outside activities which are felt to be constructive, such as church groups, classes, family occasions, etc. Some of the younger patients are excused from participation in the evening in order to do homework in the solarium. There are no formal visiting hours, as usually are maintained in a hospital, but at any time, especially in the evenings, friends and family members are encouraged to come to the ward and join in discussion of things that are of concern. Not infrequently family members are specifically asked to come in when a crisis arises concerning a particular patient. In essence, then, the evening amounts to a fairly flexible and quite intensive therapeutic session which is designed to deal with a variety of situations, whether it be intimate discussion with an individual patient, the summoning of a family council, or the management of disruptive and disorganized psychotic behavior.

In addition to these interactions involving the entire community, each patient and his primary family members attend a "small group." These meet each weekday at 4:30 p.m. and are conducted by the unit administrator and social worker with one or more members of the nursing staff in attendance. These are multiple conjoint family groups in which from 3 to 5 patients and their families are present. They serve to allow more intimate communications to occur in the context of a regular structured meeting.

From the foregoing it can be concluded that the most active portion of the treatment occurs during the hours from 4:30 to 10:00 p.m. The daytime hours are, in large part, utilized for the many staff meetings that are needed for planning, training, and supervision, and for intensive contacts with individual patients and families when indicated. The patients come to realize that in this culture it is somehow "abnormal" or socially unacceptable to spend their days "hanging around" a hospital ward. Needless to say, there are certain patients whose clinical state is such

that their presence on the unit even around the clock is necessitated, usually because of markedly suicidal, regressed, or disintegrated behavior. Nevertheless, an effort is made as soon as possible to have the patient spend some time away from the unit, accompanied as need dictates either by staff, his own family, or family members of other patients. An essential point is that time off the unit is not seen simply in recreational terms, like taking a walk around the grounds, but rather for the accomplishment of some goal-directed activity, such as shopping or taking care of matters in the home.

The Value System of the Therapeutic Community

Milieu therapy depends for its success upon the assumption that schizophrenic patients, like other people, derive gratification from the sense of belonging to a community and will incorporate much of the value system or culture of that community. Given that the patient's constitution and previous social experience lead to an incapacity to assume "normal adult" roles, a therapeutic milieu should provide experiences which make it possible to assimilate values facilitating the assumption of such roles. The culture is difficult to describe since it is continually evolving and derives so much from the value system of the principal staff members. There is a certain *Gestalt* of values which are perhaps distinguishable, however, and these can be described as "nonchronic schizophrenia." To communicate that aspect of the culture it is necessary first to state our concept of the role of chronic schizophrenia, and it will then be more easily seen how many aspects of the therapeutic community's value system are in opposition to each of the features of the chronic schizophrenic role. A chronic schizophrenic is a psychologically sick person who is affectively withdrawn and socially isolated even from his family and who is incapable of assuming normal adult roles, therefore living indefinitely an empty, autistic, joyless, unproductive life in a mental hospital cared for by a psychiatric staff.

One of the most distinct aspects of this therapeutic milieu which is in opposition to the assumption of the role of the chronic schizophrenic is the effort to minimize dependency upon the hospital. It is considered "bad" to live one's life in a hospital to any degree beyond the absolute necessary minimum. Patients are encouraged to spend as much time as possible away from the hospital, to sleep at home frequently, and to become out-

patients as soon as possible. All patients are forbidden to make use of many facilities in the Clinical Center which are ordinarily available to people on the other services. Dances in the recreation hall, evening movies, and other entertainment are off-limits. The patients, instead, are urged to attend movies in town and to seek appropriate recreation with friends and social groups. With allowance for special circumstances other areas considered off-limits are the hospital barber shop, the cafeteria and snack bar, and the dry goods shop.

A difficult area with which to deal is that of medical services. A complete medical and neurologic evaluation is done routinely on every admission, but follow-up medical care as much as possible is directed to family physicians or specialists in the community. This has necessitated consideration of the issue of medical responsibility which creates little difficulty, however, for ailments such as dermatologic conditions, dental problems, optical refractions, and chronic conditions which are amenable to office treatment. This philosophy is extended to rule out of the therapeutic milieu certain things which are traditionally seen as part of general psychiatric treatment, such as occupational therapy, art therapy, music therapy, routine nonpaying jobs around the hospital, and even paying jobs within the Clinical Center. Patients must find useful and gratifying ways to spend their time outside the hospital.

A crucial element, perhaps the essential one, in the treatment is the distinct role assumed by the staff. If this role is compared to that of a traditional psychiatric staff member, it stands out in marked contrast. Instead of assuming the professional distance of the therapist or custodian, what is achieved is an intense personal affective engagement of the staff with the individual patients and their families. This is important in altering a life situation that has assumed, or has the potential to assume, the quality of a stable social system in which both the patient and family accept an identity compatible with the "career" of a mental patient. In order to alter this system it is considered necessary that the staff bring to the situation energy and emotional arousal. The staff are encouraged to be open and direct in their dealings with the patients and in the expression of their own feelings. In order to overcome the affective withdrawal of patients it is necessary to prevent the affective isolation of staff which so frequently occurs in mental hospitals. The goal is to provide a setting in which meaningful emotional interaction can occur between staff and

patient as opposed to a type of society consisting of sick people and their caretakers. One of the most difficult problems to deal with arises from the expectation that patients be responsible and direct in their communication. As so frequently happens, patients instead display symptoms, and this arouses anger in the nursing staff. But traditionally, however, nursing personnel are not allowed the expression of intense feelings of anger, and this prohibition leads to a situation of isolation and mutual withdrawal. Therefore, much effort is expended toward training the staff to become aware of their own feelings and to permit within proper bounds the open expression of such intense feelings including anger. For example, the staff will become furious when patient A.J. falls to the floor and injures herself rather than talking directly about her feelings of failure and sexual guilt. In a similar fashion P.D.'s cryptic notes, which are left around the day room, are angrily torn up and a concerted effort is made to have him talk openly about his concerns. This becomes a difficult and taxing but nevertheless productive process when one talks about and experiences one's own and the patient's anger, sadness, affection, resentment, loneliness, and other intense feelings.

In many ways the expectations placed upon patients are in direct opposition to those conventionally asked of a psychologically sick person. It may be imagined that patients find it difficult to assume responsible adult roles because they think of themselves as peculiar and incompetent and because they lack self-confidence. Symptomatic behavior is viewed as a declaration of this felt incompetence. The staff and members of the patient group who have assimilated the culture meet this declaration of incompetence with the expectation and further with the demand that the patient can, should and will function. Essentially an attempt is made to communicate the belief, which has become a part of the culture, that it is impossible to have self-esteem if one does not do things which lead to self-respect. The staff takes the responsibility initially for "forcing" * the patient to enter a concrete functioning role, and the belief is communicated that in time the role assumption itself will be assimilated into a more self-respecting identity. Generally the patient meets this with a great deal of resistance,

* Naturally, patients are not literally forced and, in fact, cannot be forced to do anything. Rather the authoritarian assertion that someone must work is a way of permitting the patient to do so without requiring that he himself assume full responsibility for the decision.

whether it be through simple verbal rebuttal of these expectations or through more symptoms and behavioral "acting out." This resistance is not difficult to understand when one considers that we are asking a person who has enormous feelings of helplessness, incapacitation, and dependency to tolerate intense anxiety and to experiment with the assumption of new and threatening roles. This difficulty is explicitly recognized but not at the expense of abandoning the expectation that symptomatic behavior can and should be abandoned.

In implementing this view that patients should be living in a real role, they are encouraged to pursue the normal channels of finding a position, for example, through want ads, employment agencies, government bureaus, and ordinary "pounding the pavement." The staff must somehow develop the skill of estimating a patient's capabilities so that expectations are not too low and thus damaging to self-esteem, nor too high and eventuating in a sense of failure. Patients who have been unemployed for a long time are urged to find gainful employment though perhaps at a level below what would otherwise be considered commensurate with their intelligence or education. Subsequently there is a push from the staff to move to a higher level position if possible. Newly admitted patients who have been working are expected to return to work as soon as possible; and frequently one's employment schedule is not interrupted even though there is an admission to a "mental hospital." Students who are required to leave school usually obtain interim employment or enroll in part-time courses with the idea that eventually they will return to full-time academic pursuits, if that seems appropriate. Frequently, when a patient is without any skills, enrollment in various business, secretarial or trade schools is encouraged prior to obtaining a permanent position. For those patients in school, we work with the school administration in an attempt to keep the person in class if possible. As an alternative, correspondence courses or outside tutoring are frequently arranged. Generally we shy away from using such services as sheltered workshops and vocational rehabilitation agencies, but in certain cases these seem to be the appropriate level of expectation and are thus encouraged.

As much as possible the patient is expected to carry through his pursuit of a role independently, but in fact considerable impetus and support are derived from the staff. Much of the responsibility for coordinating these efforts rests with the Vocational and Recreational Counsellor. She functions

not so much as an employment agency but rather as a source of counsel and as a liaison between the patient and the community. Those patients who are not yet functioning are required to attend weekly meetings led by her, which focus on problems of establishing oneself in society. These meetings are not held on the unit but rather in a downtown meeting room, again a symbolic reinforcement of the centrifugal quality of the ward program.

The emphasis on life outside the hospital and the assumption of functional roles is intimately interwoven with the therapeutic work that occurs on the ward itself. Given the assumption that dealing with concrete issues of daily living plays a major part in the patient's illness, the staff is trained to interact with patients over realistic experiential problems that emerge as one tries to cope with life. The choice of matter for discussion leans more toward what one might call reality issues as opposed to the exploration of dynamic material. A rule of thumb on the unit is that one cannot legitimately talk about his intrapsychic problems until he has obtained some level of social functioning. It is as if one must first have a role, i.e., "exist," before one can profitably explore intrapsychic material. For example, patient F.B. was a 24-year-old housewife who had found herself unable to cope with simple tasks and who was preoccupied with delusions about her body, questions of sexual identity, and many complex issues dealing with her relationship with her husband. Although she was rather disorganized in her behavior she insisted on bringing up problems in her marriage. It became quite apparent that neither she nor anyone else was able to deal reasonably with these marital problems, given the current level of her psychic organization. The staff took the position that nothing was discussable except the question of her daily living. Over a period of several months she gradually organized herself and obtained part-time employment. Subsequent to this she could not only see herself in a more autonomous position vis-à-vis her family but also had given up many of her symptoms. Having achieved this, it then made sense to deal with questions of her relationship with her husband, father and siblings, her feelings about her mother's death, etc.

It takes a long time to "grow up," alter one's life pattern and assimilate an adult identity; therefore, the therapy is viewed as long-term with an indefinite commitment to the patient. Nevertheless, the treatment is seen as having a "vector," that is, a direction and, as far as possible,

specified goals. This is in contradistinction to a more open-ended, less goal-directed type of interaction, which characterizes long-term psychoanalytic therapy. The time course is such that the patient may stay in treatment indefinitely but with the condition that there is something he is working toward or would like to accomplish, whether it be in the nature of concrete practical goals or specific interpersonal problems. Ideally, the time comes when patient and staff agree that there is no need to continue, whereupon the patient is discharged. In principle he is free to return to treatment in the future should it serve a useful purpose. Thus, in a sense, the unit serves as an extended "family" in which the patient lives while "growing up" with the eventual goal of independence from the "family." Should trouble arise after the patient leaves "home" the "family" stands ready to help if possible. Unlike an actual family, however, the unit will not maintain an indefinite commitment to a patient who is only using the unit to sustain a chronic adjustment. If a vector of growth is not discernible for several months, patients are discharged and invited to return should they see the possibility of using the unit more constructively in the future.

Sustaining the affective engagement and a direction in therapy is a relatively simple matter when the patient presents well-specified problems and goals and acts on them accordingly, but as a rule this is not the case with patients as severely disturbed as those on this unit. More often, the psychiatrists and staff are called upon to wage a "war against timelessness" and assume a rather authoritarian position regarding what the patient should be accomplishing and dealing with. This often serves to simplify the patient's position in that the staff takes responsibility, so to speak, for decision-making, the patient assuming a role because we demand it. As he lives in the role it becomes incorporated and he assumes increasingly more responsibility for maintaining this adult identity and its attendant decision-making. As well as providing a stimulus for role-assumption this also serves to provide a focus for interaction between staff and patient. Important in this method is the ability to "set up a fight" with the patient's resistances and yet be able to shift when it appears as if we are in a blind alley because our expectations are unrealistic.⁷ In order to facilitate the maintenance of the vector and overcome the danger of timelessness, a weekly treatment position for each patient is formulated by the professional staff under the leadership of the unit psychiatrists. This statement of policy

is then made available in print to the patients and families.

Although the unit often tends to assume the nature of a substitute or extended family for the patients, particularly the adolescent patients, therapeutic work with the natural family remains a principal focus. This is considered of the utmost importance as one means of combating the social isolation of patients from their families. As mentioned previously, family members are required to attend 3 formal meetings per week. These participants may be spouses, parents of unmarried patients, or those of married patients who still interact significantly with their parents, and, in addition, other members considered to be significant, for example, siblings and children of adolescent age or older. The relatives come to be considered as part of the total therapeutic community and are often expected to assist in the management of acutely disturbed patients other than their own relative. In working with the families, the operating assumption is that patterns of interaction exist in the families of patients which tend to reinforce psychosis and lead to chronicity. Further, it is assumed that much of the patient's psychopathology is intimately bound up with his feelings toward his family and relationships with them. Familial issues are thus dealt with in an intensive way over a prolonged period of time, and an effort is made to detect and correct factors which are pathogenic and to enable the patient and family to establish more satisfactory ways of dealing with one another. There is a tendency frequently in psychiatric settings for family members to assume a superordinate position toward their "sick" or "bad" patient relatives. This view is challenged continually and the alternative concept reinforced that the whole family is involved in the process at a common level though only 1 family member may be exhibiting symptoms which are designated "sick." It is not infrequent to come to understand an exacerbation of a patient's symptoms as an indirect reflection of a changing attitude or an increase in anxiety of a family member.

The foregoing by no means represents an adequate or total description of the culture. It does emphasize those elements which stand out clearly as a *Gestalt* designed to oppose the development and perpetuation of the chronic schizophrenic role as defined above. Noticeably absent is discussion of the overcoming of 1 aspect of the schizophrenic syndrome, "joylessness." It is difficult to know how to make people happy, and often these patients seem so joyless that one wonders how they

go on living. Hopefully, some measure of satisfaction is gained in learning more adequate interpersonal skills and being efficacious in the real world. Perhaps of use is the fact that the staff enjoys the work and particularly seems to enjoy the interaction with the patients. We can only hope that such pleasure is contagious, and often it appears to be.

Results

It will not be possible to make rigorous statements regarding the efficacy of the treatment approach for a number of years pending the completion of formal outcome and follow-up studies. We can only state our impressions with full realization of the uncertainty of our conclusions. One of the most striking phenomena is the rapid and marked diminution in overt psychotic symptoms observed in the large majority of patients, even those who have been chronically regressed and psychotic at other hospitals. This is not equivalent to favorable outcome, however, since many of these patients appear still unable or unwilling to assume normal functional roles outside the hospital and continue to require hospitalization.

To date, 114 patients have been admitted to the unit. Of those patients staying in treatment for a month or more (about 90 per cent of admissions), and thus long enough to be evaluated, about $\frac{1}{3}$ have had a poor outcome and were transferred as treatment failures to other institutions or discharged to home as chronic psychiatric invalids. Of the remaining $\frac{2}{3}$, about $\frac{1}{2}$ were discharged with fair outcomes, evidencing "social recovery" but less than optimal role function; the other half were discharged with good outcomes with little or no psychotic symptoms and apparently functioning in a satisfactory adult capacity within the community. We have little information as yet regarding the ability of these patients to sustain appropriate role functions over a long period. Moreover, we are not able to compare this distribution of outcomes to the effects of other treatment methods. It is our impression, however, that patients who have been chronically hospitalized for more than 2 years prior to admission do not do well and might do better in a more supportive rehabilitation program. Patients with a first acute psychotic break do quite well, but a high percentage would be expected to have a good outcome in various forms of treatment. It is therefore difficult to assess the contribution of this specific therapeutic milieu.

We speculate that over the long range this approach would tend to minimize the number of acute psychotic patients becoming chronically impaired. Our most gratifying experiences, however, have been with patients with subacute psychotic illnesses—people who have had intermittent difficulty and psychotic symptoms for several years and are gradually falling out of the stream of life but have not yet surrendered to chronicity. This group of patients would be expected to have a very poor prognosis if not treated, and a number of such patients have done remarkably well on the unit. It may be that it is for this group in particular that the treatment approach is best suited, and controlled studies are now under way to evaluate this possibility.

Summary

This report describes an experiment in social interactional treatment of schizophrenic and other severely disturbed psychiatric patients. An attempt has been made to create a culture which would facilitate the assumption of normal adult roles and oppose the development of the chronic schizophrenic syndrome. Underlying theoretical considerations have led to an unusual use of the hospital and the assumption of roles by the nursing staff somewhat foreign to those traditionally espoused. It is not yet possible to adequately evaluate the results of this treatment, but there are indications that it is most effective with subacute psychotic patients who have been ill for several years and ordinarily would have a poor prognosis. It may also minimize the occurrence of chronic impairment following acute psychotic illness.

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Leprosy Today

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THE PRACTICING PHYSICIAN in the District of Columbia probably considers leprosy an exotic disease which is of no practical importance in his daily work. In the Washington area during the past 15 years approximately 20 cases of leprosy have been observed. Some patients with moderately advanced or advanced leprosy have been treated for several years without leprosy having been considered among the diagnostic possibilities. Medicine today is becoming increasingly international, and therefore physicians in the United States need to develop and maintain an awareness of diseases occurring in all parts of the world. This awareness is especially important to physicians in Washington, the hub for international travelers to the U.S.A. and the location of embassies of many new nations where infectious diseases are prevalent.

In 1964, 103 cases of leprosy were reported to Health Departments in the United States. Thirty-nine of these were from the state of Texas. In September 1964 there were 68 cases officially under observation in New York City. The U. S. Public Health Service Leprosarium at Carville has approximately 330 patients under treatment. The total number of cases in the U.S.A. is estimated to be between 1,000 and 2,000. In the world, however, leprosy is a very important disease. In 1960 the Leonard Wood Memorial (American Leprosy Foundation) reported that a survey of the governments of the world (Red China and Russia not replying) produced an official estimate of 4,760,437 patients with leprosy. Realizing the tendency of some governments to minimize the number of cases of leprosy under their jurisdiction, the World Health Organization has stated that there are at least 10,000,000 people in the world who have leprosy. It has been estimated that 25 per cent of patients with leprosy are severely disabled, principally from involvement of peripheral nerves. In addition to the physical disease, in spite of modern scientific

knowledge, most patients with leprosy, because of the age-old fear, suffer psychologically.

The *Mycobacterium leprae* (the leprosy bacillus), the first bacterium discovered as the cause of a human disease, was reported by Hansen of Norway in 1874, but now, 91 years later, it is the only bacterium known to infect man that has not been cultivated in vitro. Also, leprosy as a progressive disseminated disease with gross lesions has not been reproduced in animals. Although very mild microscopic infections are, after many months, observed in the ears and footpads of mice and hamsters at the site of inoculation of leprosy bacilli, in the short life span of these rodents (approximately 2 years) progressive macroscopic lesions and a disseminated disease have not been achieved. In man, when exposure can be determined, 3 or more years usually elapse before a grossly visible lesion is observed.

The treatment of leprosy has greatly improved since a report in 1943 on the use of sulfone drugs by Dr. G. H. Faget and his associates at the U. S. PHS Leprosarium in Carville, Louisiana. These drugs, however, are not bactericidal. To effect improvement they must be taken regularly for many years. Many patients receiving sulfone drugs remain positive for years. The ultimate effect of these drugs on the spread of leprosy has not yet been determined.

The major road block in control is the lack of any test to detect leprosy in its earliest stages. When eventually diagnosed in a patient, the disease has usually become so advanced that many of the irreparable nerve changes that mark and disable its victims have already occurred. With the present methods leprosy can only be diagnosed after evident lesions have developed. Even in endemic areas many patients who seek medical aid are treated several years before leprosy is suspected. In leprosy there is no laboratory test that can be used for mass screening. When a physician considers leprosy a possibility,

the diagnosis has to be made on the clinical manifestations plus the demonstration of acid-fast bacilli in a lesion. The diagnosis should be confirmed by a histopathologic examination of biopsy specimen by a pathologist experienced in the disease.

Physicians in the Washington area should be interested in the role of the U. S. Government (acting through the Public Health Service) in supporting leprosy research. It is noteworthy that the first research hospital established by the U. S. Government was for leprosy. In 1905 Congress appropriated \$100,000 to build and equip a leprosy research hospital in Hawaii and \$50,000 annually to support it. This hospital, built by the Public Health Service (at that time the Marine Hospital Service) at Kalawao on the Island of Molokai, a few miles from the Hawaiian Leprosarium at Kalaupapa, was put in operation in 1909. The Public Health Service continued research on leprosy in Hawaii until World War II, and following World War II it has directly conducted leprosy research at its hospital in Carville, Louisiana and at the Communicable Disease Center, Atlanta, Georgia.

Through grants from the National Institutes of Health, research support in leprosy research has been given to several universities and to the Leonard Wood Memorial (American Leprosy Foundation). Staff members of the Armed Forces Institute of Pathology, where the leprosy Registry of the American Registry of Pathology is located, have for many years participated in studies in the pathology of leprosy, and currently at this Institute the Leonard Wood Memorial, through a grant from the National Institute of Allergy and Infectious Diseases, is carrying on experiments in the transmission of leprosy to animals. The NIAID also supports leprosy research in microbiology by staff members of the Leonard Wood Memorial at the Johns Hopkins School of Public Health and Hygiene in Baltimore.

The NIAID, through a grant to the Leonard Wood Memorial (American Leprosy Foundation) furnished the equipment for and supports the staff of the Leonard Wood Memorial-Eversley Childs Sanitarium Leprosy Research Laboratory that was opened in 1964 near Cebu City, Philippines. This is a modern research laboratory where well-trained American and Filipino scientists

carry on basic and applied research at an active hospital for leprosy patients.

Research on leprosy is now done directly at the Clinical Center of the U. S. Public Health Service in Bethesda, Maryland, where staff members of the National Institute of Allergy and Infectious Diseases conduct intensive clinical, chemotherapeutic, and laboratory studies on patients referred to the Center from Mexico. Thus the facilities of this great research facility are being used to study in depth certain aspects of leprosy. Under the meticulous surveillance of scientists from several disciplines the effect on leprosy of a promising new drug and the action of the drug in man are being thoroughly investigated. Although the number of patients in the study has been small, much valuable information is being obtained.

Also located in Washington is the Office of the Medical Director of the Leonard Wood Memorial, an American leprosy research foundation established in 1928 in honor of Leonard Wood, who, as the Governor General of the Philippines, stimulated research studies in leprosy. This foundation, in addition to the support of basic research in leprosy, since 1933 has subsidized the publication of the *International Journal of Leprosy*, the official organ of the International Leprosy Association, and in its Washington office carries on the editorial and publication activities of this journal.

In Washington in May 1965, at the Leonard Wood Memorial-Armed Forces Institute of Pathology Conference on Research Problems in Leprosy, the unsolved problem of the cultivation of *M. leprae* in vitro was attacked. Prominent microbiologists who have not worked with leprosy met with microbiologists and others doing research in leprosy to explore possible new approaches to the cultivation of the leprosy bacillus. Scientists working in leprosy from many countries participated in this conference. When the leprosy bacillus has been cultivated in vitro direct objective studies can then be made which, hopefully, will result in the development of diagnostic procedures that can be used in detecting leprosy in its early stages, thereby making possible the control of leprosy, a disease of great importance in international medicine.



PRESIDENT'S PAGE

PARTICIPATION IN MEDICARE



MOST PHYSICIANS probably disagreed, in one aspect or another, with the public policies embodied in the Medicare program—Public Law 89-97. But the basic issue has been settled. The program will soon be a fact of medical life; it has become the law of the land.

A highly personal question remains for the individual physician: How will I respond?

Some respected leaders of our profession are urging "nonparticipation." I do not agree but will explain their point of view. They do not suggest that physicians turn their backs and refuse treatment to elderly patients who need care. Rather, they suggest that physicians ignore the newly established apparatus for paying for medical care. Under this approach physicians would not participate in filling out the Government forms which would be required under the new program. Each physician would bill his elderly patients as in the past. The patients would collect from the Government or

administrative agency and pay the physician, thereby eliminating any "third party" from the "patient-physician relationship." However, this may not be possible under the new regulations, which have not been completed by HEW.

The arguments for this proposition rest essentially on the tradition that the physician should not participate in a third-party system. Some physicians do not choose to be "Participating Physicians" in Blue Shield for this very reason, yet continue to care for patients covered by Blue Shield.

I do not contend that this approach is unlawful or unethical nor does it necessarily place a hardship on the patient, but it may under the new formula. A physician's response to Medicare is primarily a personal matter. This is hardly the time for militant pronouncements from the Society's President or anyone else. Rather, as the Board of Trustees of the AMA has emphasized, the times call for restraint and "a clear mind."

The views that follow are merely the views of one physician who has endeavored to consider the question in this light.

I accept the premise that the crucial test of this new Federal program must be the medical welfare of my patients. I simply believe that, with the new law now on the books, my patients will be better served if I strive, under the regulations established, to treat them the best I know how. At this time any other attitude, including "nonparticipation" as previously described, may be unwise. What should be involved here is a method of payment, not the technique or art of medical care. If the technique and art become involved, then is the time to reevaluate our position.

Whether we like it or not, we must face the fact that many millions of elderly patients will be looking to this program to finance part of their medical expenses. They will turn to their own physicians under this program in much the same manner they have turned to them under our own Blue Cross-Blue Shield programs or private insurance carriers. If their physicians refuse to cooperate fully patients will be disappointed and frustrated. They may seek other physicians, not of their first choosing. If they also refuse to cooperate, confusion and misunderstanding will prevail. This would hardly be in the interest of quality patient care.

I believe we can demonstrate more constructive medical statesmanship by cooperating with our patients in this new method of payment. Most important, with such an attitude physicians will be better able to take the lead in shaping administrative policies under the law, or in seeking changes in the law if necessary, to preserve freedom and quality of medical care in this country. Any failure can then only be the responsibility of the Government and not ours.

Paul R. Wilson

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The significant pharmacologic actions of Lomotil are summarized as follows:

Evidence indicates that Lomotil acts directly by inhibiting excess peristalsis.

Lomotil is not known to inhibit nonpropulsive intestinal movements.

Roentgenograms demonstrate that this activity occurs within two hours after oral administration and persists for at least six hours.

Comparative studies in the rat show Lomotil to be more effective in inhibiting fecal excretion than either codeine or morphine.

Analgesic, anticholinergic, mydriatic and gastric secretory effects have not been significant.

Reduction of propulsive motility with Lomotil relieves spasm and cramping, allows physiologic absorption of fluid and reduces frequency of evacuations to provide prompt, symptomatic control of virtually all diarrheas.

LOMOTIL®

Each tablet and each 5 cc. of liquid contains:

diphenoxylate hydrochloride 2.5 mg.

(Warning: May be habit forming)

atropine sulfate 0.025 mg.

tablets • liquid

slows propulsion



relieves distress



stops diarrhea



Precautions: Lomotil is an exempt narcotic preparation of very low addictive potential: more than three million prescriptions have now been written for Lomotil. Recommended dosages should not be exceeded. Lomotil should be used with caution in patients with impaired liver function and in patients taking addicting drugs or barbiturates.

Side Effects: Side effects are relatively uncommon but among those reported are gastrointestinal irritation, sedation, dizziness, cutaneous manifestations, restlessness and insomnia.

Dosage: For full therapeutic effect—Rx full therapeutic dosage. The recommended initial daily dosages, given in divided doses, until diarrhea is controlled, are:

Children:

- 3 to 6 months—3 mg. ($\frac{1}{2}$ tsp.* t.i.d.)
- 6 to 12 months—4 mg. ($\frac{1}{2}$ tsp. q.i.d.)
- 1 to 2 years—5 mg. ($\frac{1}{2}$ tsp. 5 times daily)
- 2 to 5 years—6 mg. (1 tsp. t.i.d.)
- 5 to 8 years—8 mg. (1 tsp. q.i.d.)
- 8 to 12 years—10 mg. (1 tsp. 5 times daily)

Adults:

- 20 mg. (2 tsp. 5 times daily or
- 2 tablets 4 times daily)

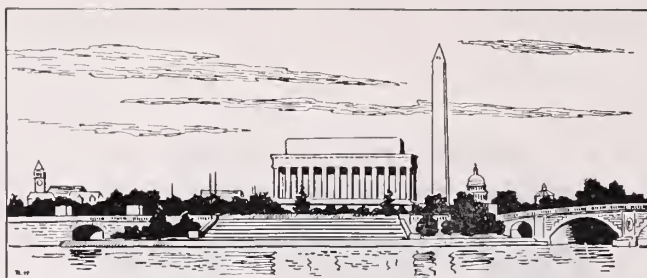
*Based on 4 cc. per teaspoonful.

Maintenance dosage may be as low as one fourth the therapeutic dose.

Lomotil is a brand of diphenoxylate hydrochloride with atropine sulfate; the subtherapeutic amount of atropine is added to discourage deliberate overdose.

SEARLE

*Research in the
Service of Medicine*



EDITORIALS

Welcome to the 33rd Scientific Assembly

THE COMMITTEE ON ARRANGEMENTS is proud to present the 33rd ANNUAL SCIENTIFIC ASSEMBLY to members of the Medical Society of the District of Columbia and to all physicians of the Washington Metropolitan Area and their guests. We are fortunate to have the new Washington Hilton Hotel available this year with its unlimited space for the Scientific and Technical Exhibits, the Scientific Program, the Motion Pictures, and the many social functions.

The Program Committee has prepared an excellent scientific program which should appeal to all physicians. There will be outstanding

speakers from medical centers throughout the United States as well as from local medical institutions.

The Social Committee has arranged special events to provide an opportunity for relaxation and for renewal of friendships.

We sincerely hope all our members and guests will find the scientific presentations instructive and the social activities most enjoyable.

WILLIAM S. COLE, M.D.

General Chairman,

Committee on Arrangements

Why Areawide Planning?

MUCH HAS BEEN SAID within the last 5 years about planning for hospitals and related health facilities on an areawide basis. Planning organizations for this purpose have sprung up throughout the country. Five or 6 of these organizations have been in existence for a number of years, but the majority have come into being in the last 3 to 5 years.

National organizations have discussed areawide planning and in most cases have endorsed it, at least in principle. The American Medical Association in a recent copy of the *AMA News* stated:

"Areawide planning for health facilities is acknowledged to be one of the more significant medical-sociological developments of the past 10 years. The value of such planning was recognized by the American Medical Association's House of Delegates in 1962 when it endorsed areawide planning on a voluntary basis as an effective means of preventing the duplication of facilities and services and of helping to hold down the total cost of hospital and medical care."

What is the reason for all of this interest in planning on an areawide basis, and why is it necessary anyway? Hospitals and health facilities seem to have gotten along pretty well through the years without such efforts. What makes it necessary now?

A look at the census data may be helpful. The American people today are largely an urban population. Most recent census estimates show that nearly 75 per cent of the Nation's population live in 212 standard metropolitan statistical areas. Thirty years ago only 50 per cent were city dwellers. This migration has meant tremendous growth to our cities.

Rapid growth in the Nation's cities has brought an increased demand for all types of facilities and services. In our own metropolitan area we can see the results. We are inconvenienced daily by the construction of freeways, the installation of additional telephone lines, sewers, water lines,

Opinions expressed in contributions to the Editorial Section are those of the writers and do not necessarily reflect the views of the Medical Society of the District of Columbia

and a number of other services and facilities which we vitally need.

A great deal of planning must go into the expansion of cities. Locally, each jurisdiction has a planning office which estimates needs for roads, schools, water, sewers, etc. to serve the expanding population. This kind of planning is done by the local governments because by and large the provision of these services is a governmental function. By contrast, health services—for which the demand has increased more than for other kinds of service—are provided through facilities which are for the most part nongovernmental, and planning for these facilities cannot be done exclusively by government.

Perhaps the need for planning for health facilities on a concerted basis can be best illustrated by an analogy. Most business enterprises plan for their future. Businessmen have long recognized that to leave the future to chance can be disastrous. If a business serving the whole metropolitan area through its various branch offices left its planning to the discretion of its branch managers without any consultation or coördination through its main office, the future of the company would be a doubtful one. In a sense, hospitals and other health facilities are in somewhat the same situation, as regards economies in planning and the avoidance of unnecessary duplication. Each facility is basically a division or a department of a total program of health care. The development of a program which will make the greatest contribution to the community within the framework of total community need is a challenge and an opportunity to each facility, but

one that cannot be met without a concerted effort of all the health facilities serving the community.

A single institution is rarely in a position to determine total community needs using only its own experience and resources. It is somewhat like the story of the 5 blind men trying to determine what the elephant is like by judging from the portion of the elephant which each can feel. Each facility necessarily judges need from its own viewpoint and so has only a fractional picture of the whole.

In the years ahead there will be significant and far-reaching changes in medical and hospital care because of the inclusion of these services in Social Security benefits. Only by concerted action can the hospitals and health facilities which serve our metropolitan community formulate an effective course of action to keep pace with change and maintain an effective system of health care facilities.

The areawide planning effort here is new. The Planning Council in Washington is only 3 years old. Much has been learned in those 3 years, and those who have worked with the Council believe that its experience will be increasingly valuable to the community in the years ahead.

If the operation of health facilities is to survive as a voluntary system in the United States, it is essential that the facilities learn to control their own affairs in the best interest of the public that they serve, for if they cannot the public may act to insure that its best interests are served.

JOHN R. MCKINNEY

*Executive Director, Health Facilities
Planning Council*

Community Health Week—November 7-13, 1965

FOR THE PAST 3 YEARS the American Medical Association has sponsored an annual national observance of Community Health Week. The Executive Board of the Medical Society of the District of Columbia has enthusiastically endorsed a program whereby we shall participate in its observance this year.

November 7-13 has been designated as Community Health Week. Radio and television interviews on topical medical subjects such as "Careers in Medicine," "Communicable Disease Control," "The Physician's Contribution to the Community," and "Local Health Resources" will be featured. The Society's Speakers Bureau will

supply speakers for local service clubs. Public programs and displays will be featured at various hospitals and community health centers. Local officials, the Junior Chamber of Commerce, and the Board of Trade will be apprised of our program.

All physicians are urged to coöperate when asked. All physicians are solicited to support this beneficial project which will permit us to serve our community and allow the community to learn more about us.

WARREN D. BRILL, M.D.

*Chairman, Committee on Public
Education and Information*

Report on Trauma^{*†}

Tension Pneumothorax

TO DIAGNOSE and effectively treat traumatic tension pneumothorax, it is necessary to understand the pathologic physiology of the lesion. Traumatic tension pneumothorax usually results from a fractured rib tearing or puncturing the lung. Air escapes from the lung when the pressure in the pleural space is negative or during inspiration, and during expiration the laceration is closed so that no air can escape. Thus on each inspiration an increasing amount of air escapes from the lung into the pleural cavity and is trapped, steadily diminishing the amount of space within the chest for expanded lung. For this reason the patient tends to assume an ever-increasing position of inspiration, much as does a patient with emphysema who is unable to empty adequately his lungs.

Thus a patient with tension pneumothorax arrives in acute respiratory distress, with a chest that appears to be overexpanded and with shallow rapid respirations. He is usually restless and may even be combative. For a broken rib to tear the lung it must also tear the parietal pleura so that there is usually evidence of subcutaneous emphysema as manifest by crepitation. This emphysema may be small in amount or quite massive, depending on the size and location of the tear in the parietal pleura. If the patient is conscious and can complain of pain, the localization of a fracture by palpation and any subcutaneous emphysema should in themselves lead to the diagnosis. Chest X-ray, while helpful, is not necessary. If it is decided upon it is important that the exposure be made with the patient in the upright position, after ascertaining that there is no spinal fracture which might be complicated by such movement. If the film is taken in the supine position, the air, fluid and lung will distribute themselves one on top of another so that it may be impossible to determine whether a pneumothorax is present or not. If the patient is sitting up or, if necessary, placed in the lateral decubitus position and the film shot across the table, the air-fluid levels will be immediately identified.

If a patient is in acute distress upon arrival and there is pain in the chest and any evidence of fractured rib plus subcutaneous emphysema, a needle should be placed in the chest in the second anterior interspace and air aspirated without X-ray examination. This will lead to immediate relief of the respiratory distress. If this is the case, water-seal drainage should be instituted immediately. This can be done quite simply by pushing a hemostat or a Kelly clamp into the chest through a small incision in the skin, and then advancing a catheter through the wound tract (figure 1).

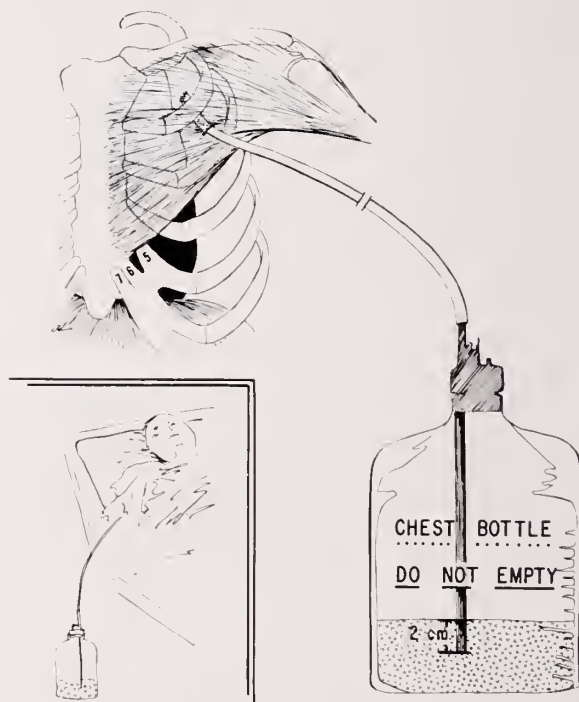


FIG. 1. Apparatus in place for water-seal drainage.

The catheter should be large in size, preferably 26 to 28 French. The ideal place for inserting it is in the second anterior interspace, because there are unlikely to be any adhesions between the lung and the chest wall in this position, and also because the catheter is not likely to get any blood in it and so become occluded with clots. A piece of tubing can then be attached to the catheter and the same tubing placed in a jar under about 2 cm. of water. It should be taped in place and clearly marked so that no one will attempt to dump the water out and thus destroy the water seal.

The principle involved in the foregoing procedure is that air can escape by bubbling out

* This is the fifth of a series of papers concerning Trauma submitted by the North Carolina Chapter of the American College of Surgeons Committee on Trauma. The others appeared in the May, November, December, 1964 and May, 1965 issues of the *MEDICAL ANNALS*.

† Reprinted by permission from *N. Carolina Med. J.*, volume 24, no. 6, June 1963. Request for permission was made at the suggestion of Dr. Milton C. Cobey, Chairman, Committee on Trauma, Section III, American College of Surgeons.

through the water, but in order for the patient to suck air back into the chest, he must lift the column of water equal to the distance from the chest to the position of the bottle. For this reason, the bottle must be kept on the floor or at least 2 feet below the level of the patient's back. When the tube has been placed, the patient should be encouraged to cough.

Patients with tension pneumothorax may also have complications of multiple fractured ribs and an unstable chest wall. This problem requires some means of restoring stability and will be discussed in the next of this series.

Health Dept. Notes

The Changing Nature of Glenn Dale Hospital

UNTIL 6 YEARS AGO Glenn Dale Hospital was used by the D.C. Department of Public Health only for tuberculosis patients. But in 1959, with a decreasing need for this kind of TB care, Glenn Dale was opened to persons with other long-term illnesses. The changing nature of this patient population at Glenn Dale reflects the changing nature of illness in this country.

The patient population in a long-term hospital such as Glenn Dale tends to be stable. Patients often stay for several months, and this requires a different type of care than offered by a general hospital. There is more need in a long-term hospital for occupational and physical therapy and for social and other rehabilitative activities. There will be periods of intense nursing care for many individual patients because they are likely to be very ill. But the continuing nature of their illness, with the predictability that they will be there for a long time, makes long-term programs of treatment necessary. Being "in the hospital" can become a way of life.

Glenn Dale operates from 20 buildings on 216 acres of land in the open countryside. Its cost of operation per patient day is about \$25, and most patients, both TB and others, are medical indigents whose hospitalization is met from public funds.

In addition to treatment and rehabilitation for patients, Glenn Dale also offers health educational services to patients and their families. This enables them to understand better a particular illness and encourages more coöperation in therapy.

Since the shift began at Glenn Dale 5 years ago the Hospital has continued its development toward being a chronic disease and rehabilitation center. This transition has included the expansion of the physical medicine and rehabilitation section through merger with the occupational and physical therapy units. The Hospital staff has also been increased, and it now includes a psychiatrist and a consultant in speech pathology and therapy.

Professional education is also available to medical students and physicians. There are currently programs for students from affiliated schools of medicine in the Washington area; for medical residents in pulmonary diseases; for surgical residents in thoracic surgery; for nursing students in care of the patient with tuberculosis; and considerable in-service training for clinic and hospital staff. There is also considerable research in TB, chest diseases and other chronic conditions at the Hospital.

Since Glenn Dale began its transition, the nature of the patient population has indicated the rise of chronic diseases. The number of persons treated for other than tuberculosis has doubled, with most of such patients being treated now for cardiovascular, musculoskeletal, respiratory and digestive conditions, in that order.

Although the incidence of TB in the District is still high, the number of patients treated at Glenn Dale since 1961 for that illness has been rather constant. New drugs and new ways of therapy permit less hospitalization and more clinic care, with a reduced need for hospital beds for TB. This is shown in the following table:

Admissions	1961	1962	1963
Tuberculosis	464	581	534
Chronic disease	141	185	237
	—	—	—
Total	605	766	771
Discharges			
Tuberculosis	521	578	561
Chronic disease	124	175	184
	—	—	—
Total	645	753	745

Glenn Dale Hospital is organized into 3 divisions, Treatment, Nursing, and Administrative. The Treatment Division is also organized into 3 units, Medical Service, Surgical Service, and Research Service.

Patient care is provided through the Treatment Division. Inpatient care is offered through the Hospital itself; outpatient, through the Department's Northwest Central Clinic. Most such out-

(Continued on page 514)



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R_x for TV Doctors*

MURDOCK HEAD, M.D., LL.B.†

Professorial Lecturer in Forensic Medicine, George Washington University School of Medicine

SOME PROFESSIONAL CRITICS have claimed that television doctors are overidealized, meaning that no person is ever depicted as receiving a bill for skilled professional services, that no person in need of care is ever denied entrance to a hospital, and that doctors are unfailingly wise. This, of course, may be true about *Dr. Kildare*, *Ben Casey*, and *The Doctors and the Nurses*. (Even *The Fugitive*—a pediatrician who has been convicted of the murder of his wife—is acknowledged to be innocent of the crime.) In these programs the medical doctor is nearly always treated with respect; stories avoid giving false hope to the incurable, and the skill of the physician is kept within reason.

My concern here is not for the members of an honorable profession, frequently engaged in a drama of life and death, but for the possible effect of medical drama on millions of viewers. There is a misgiving about the false pictures that laymen may forever carry in their minds about hospitals and doctors. I have come to suspect that the dramatic medical license of some programs may be enough to set a layman's nerves on edge and perhaps to drive him to swallowing inordinate quantities of the nostrums offered hourly to the television audience.

It is a truism in schools of medicine that some students tend to acquire the symptoms of each disease they study. Fortunately, this tendency is put into its proper perspective as the student continues his training. I am wondering, however, if the members of the television audience are able to develop the same kind of perspective. Because the television audience has no medical training,

the picture it receives of the medical world can be misleading. It is often one that inspires little confidence.

There are numerous examples. The proper atmosphere for a hospital is one of calm efficiency in which the care of patients is carried out as a matter of routine. The television hospital, on the other hand, is a place in which crisis is continuous. Activity is frenetic, rather than regular; someone is always rushing from one emergency situation to another. A vague feeling of doom is abroad.

For the purposes of melodrama this maintenance of tension may be necessary; it allows TV doctors to rush in with a combination of sage medical knowledge and histrionic derring-do to bring about miracle cures and startling recoveries. For the purposes of serious drama I wonder if all of this is really needed; and for the purposes of public information such histrionics tend only to confuse the viewer. They often bring rueful smiles or frowns to the face of a physician who might be watching. Judging from some of the scenes in the halls of the TV hospitals one might reasonably conclude that medical administration is chiefly a problem of high density traffic control. The avoidance of head-on collisions between fast-rolling stretchers and fast-rushing interns is a task that might well challenge the talents and experience of a detail of mounted police in Times Square.

The personalities and demeanors of some television physicians can hardly be a source of comfort to the viewing public. Certainly they are at variance with their real life counterparts. The arrogance of a Ben Casey would never be tolerated by the attending staff of any hospital; Dr. Casey would receive a rapid and pointed course in manners from his superiors. If he didn't pass that course his appointment to the hospital would be terminated. Surgical residents do not dictate hospital policy except in their dreams.

Dr. Casey is not the only one whose demeanor may be questioned. The general atmosphere of hostility that one finds among doctors in television hospitals is both disquieting and unrealistic. A hospital staff is made up of a group of professionals who, for the most part, treat each other with respect and civility no matter what their personal feelings might be. This civility and respect is a

* Reprinted by permission from *Television Quarterly*, the Journal of the National Academy of Television Arts and Sciences, 1965, 4, 28.

† Dr. Murdock Head holds degrees in 3 professions: dentistry, medicine, and law. While professor of forensic medicine at George Washington University School of Medicine he became interested in television. He has since produced a series of public affairs programs for WRC-TV and is engaged in film production at the Airlie, Va., Conference Center, which he founded and heads. "Reprieve," his film on the useful lives ahead for victims of heart attacks, won an "Emmy" Award from the Washington Chapter of the National Academy of Television Arts and Sciences.

necessary element in the proper functioning of a medical center. Without it the quality of patient care would be dismal. I know of few physicians who would tolerate the lordly tyranny of a Dr. Gillespie, who hands down platitudinous decisions in the manner of a Gilbert and Sullivan general. A physician on the attending staff of a university hospital is a man who, through his professional training and accomplishments, has earned the respect and the courtesy of other members of that staff.

The treatment of patients by television physicians could well be another source of concern to a viewer who might have to enter a hospital at some time in the future. I have the distinct notion that if I were a bed patient in a hospital and were exposed to the tender mercies of Dr. Casey my condition would take a turn for the worse when he entered the room. There is no reason why a doctor can't be polite to his patients. Most physicians are courteous because they know that a good personal relationship between patient and physician is a necessary ingredient in successful treatment. Conversely, I don't think that it is essential that a physician be as mild as Dr. James Kildare, but I do feel that it is not good practice to enter a patient's room wearing an unbuttoned smock and an aggressive manner.

Physicians are also people. They have had intellectually demanding professional training after 8 disciplined years of college. In life, if not on television, they usually have families. They often have wide interests beyond medicine. They may take an active part in the affairs of their communities. Many of them have hobbies. Their lives, outside of medicine, are much the same as the lives of other citizens with comparable educations. They are not inhabitants of an insulated world that is enclosed by the walls of a hospital.

It seems to me that the personalities of the TV doctors might be enriched, as well as delineated more fully for the audience, if these men removed their white coats, at least once in a while, to experience a fuller life. I remember that Dr. Kildare did have a date once, but that was really because the girl was a patient he was treating for epilepsy. The writers who govern his activities might remember that he is not a monk but an active young physician with the same intellectual and emotional requirements of other men. One wonders, too, what happens to Dr. Gillespie after he puts on his black fedora and walks out of the hospital into the night. The only incident that I can remember in Gillespie's personal life was an episode in which he was being pursued by a

wealthy widow. He was able to spurn her obvious charm with almost the same *élan* he ordinarily reserves for impertinent suggestions advanced by cheeky interns.

Of Dr. Casey's personal life we know little. One conclusion that might be drawn is that Casey finds the practice of medicine so offensive that he moves around in a state of continuing depression. This portrayal might be enough to frighten away potential medical students, who, like other people, want to lead normal lives that contain a certain amount of satisfaction, variety, and even humor. Medical television could in part account for the doctor shortage.

The subject of medical humor is a resource that remains virtually untapped in the television medical shows. Doctors do have a sense of humor; they have their own "inside" jokes and share a special humor that comes from mutual understanding of the implications of their profession. None of this is seen in the confines of an institution like Blair General Hospital. To a television medical-writer a hospital is a place where everyone goes to be sick and sad. Anyone who dared crack a joke in the doctors' dining room would be drummed out of the corps.

In their search for a hero's role the writers of television's medical melodramas feel constrained to assign to their man every task in medicine. Dr. Casey, for example, is a resident in neurosurgery. As such, he should be concerned almost exclusively with problems in his specialty. During his internship he would have been concerned with cases of all kinds. However, training for neurosurgery is just what the name implies; it is not general practice. A resident in neurosurgery is only one of many residents in a hospital. There are men who are being trained in internal medicine, general surgery, pathology, ophthalmology, otolaryngology, psychiatry, and other areas. Each of these specialists has no time for exotic tropical diseases or other afflictions that fall outside the realm of his immediate and continuing concern.

Residents in neurosurgery don't spend their time treating psychiatric patients any more than a resident in internal medicine spends his time removing tumors of the brain. The reason there are specialists is that there is so much knowledge in each field that no one man can master all of them adequately. This is a fact that the public needs to understand.

A related fact is that specialists in various fields consult with one another in order to take advantage of each other's training and experience. The team concept of patient-care that is so important

in hospitals seems to have eluded the television hospitals almost totally.

The published critics have invariably attacked the believability of medical programs in the wrong way. There were complaints about the "father and son" relationship of Ben Casey and Dr. Zorba, or between Dr. Kildare and Dr. Gillespie. As in all education, the older and experienced are responsible for the training of the young and inexperienced.

My own criticisms of "TV R" are advanced with the full understanding that these programs are designed to entertain, to divert, or to enthrall rather than to inform. To do so they must present activity that involves the viewer with the action and that persuades him to identify with the protagonists. Without this identification the viewer would turn to another channel. But it is this intense quality of identification that I find disturbing when I see the unrealistic portrayals of physicians on television. Viewers, through identifying with the TV doctors, are receiving an impression of physicians and of medicine that can disturb the physician-patient relationship that is vital in actual life. This relationship is built upon the maintenance of trust and confidence so that adequate care may be provided for people in need of it.

Without losing the important elements of drama it would be possible to portray some measure of reality without distortion and still heighten dramatic impact. There is "drama" in the daily life of every practicing physician. In fact, the physician has been a favorite subject of plays for hundreds of years. After all, he is a man who is concerned with life and with death, with suffering, and with compassion. But not all drama is found in the cataclysmic events of people's lives; there is drama in simple things as well. I shouldn't have to mention the drama implicit in love, or dedication, or even in the dereliction of duty. There is also drama in the cut finger of a child, certainly as far as mothers are concerned. There is also an opportunity to provide information, accurately and understandably, without weakening the value of entertainment.

Let us look for a moment at the relationship of medicine to our total society. Medical problems are seldom problems simply of pains and drugs, or of hospital emergencies. They are also social problems, economic problems, problems of the environment in which we live. The teen-ager with a knife wound has usually suffered many other wounds before he reaches the situation in which a knife might be thrust at him. These previous wounds have been inflicted by society. These and

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other injuries have also affected the wielder of the knife. It is the legitimate province, it seems to me, of the medical television shows to explore the many areas of life that have a bearing on medicine and to illuminate the relationship of medicine to these areas. Certainly there is adequate drama in this kind of approach. And—more important—there is truth. There is drama, too, in the rehabilitation of alienated youths, in the treatment of victims of chronic disease, in the problems of air pollution, and even in the problems of communicating medical knowledge. These things, and many more, are part of medicine today. And medicine is part of them. The role of medicine in society needs to be illuminated; and that role is far broader than one could imagine if he formed his opinions solely on the basis of television viewing. Unfortunately, too many viewers are forming their opinions on that basis.

Where is *The Defenders* of medical television? Where do we find television physicians as believable as the Prestons are as attorneys? Certainly we need dramatists and poets and storytellers. But the art of fiction doesn't have to be a stranger to fact. I realize that liberties must be taken in order to tell a story in the short time allotted to a specific television program. What I object to in the medical television programs that I have seen is a continuing tendency to present characters that are unrelated to life.



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*Tainter, M.L. and Buchanan, O.H., Ann. N.Y. Acad. Sc. 54:438, 1954

Origin and Activities of the Women's Medical Society

IN THE SUMMER OF 1909 Dr. Mary Parsons, Dr. Louise Tayler-Jones and Dr. Ada Thomas wondered "if it would be possible to develop an organization of women physicians." Potential members were invited and 15 women doctors attended that first meeting of the proposed organization. Of these only Dr. Patience Bourdeo-Sisco, now of Baltimore, is still living. Dr. Parsons was elected the first President. She is also remembered as the first woman to become a member of the Medical Society of the District of Columbia. (After a persistent and lively controversy 1 word of its Constitution was changed from "men" to "persons" and the membership was then open also to qualified women.) The other officers of the new Women's Medical Society of the District of Columbia were Dr. Sophie Nordhoff-Jung, who was educated in Munich; Dr. Emma Lootz-Erving, an orthopedist; Dr. Mary O'Malley, a psychiatrist at St. Elizabeths; Dr. Elizabeth Sohon, eye, ear, nose and throat specialist; and Dr. A. Frances Foye, who graduated from Howard University because it was a "better school for the women" than George Washington.

Among other well remembered early names are Drs. May Baker, Loretta Kress, Kate Karpeles, Mary Holmes, Edith Seville Coale, and Anna Bartsch-Dunne. Dr. Coale perpetuated her interest in medical education for women by bequeathing a scholarship fund for this purpose which is being administered by the Zonta Club of Washington. Although now retired after approximately 50 years

of practice, Dr. Dunne still regales those who hear her stories about being one of the first women in D.C. to own and drive an automobile. In the early 1900's she would frequently get stuck in the mud of F street and sit looking demure and helpless until several kind gentlemen came to her rescue.

The minutes of the first meeting state: "Several having given their opinion, it was moved and carried that we form a club mainly for scientific purposes," "that meetings be limited to once a month for 8 months of the year," and that "members present papers in alphabetical order." The Constitution provided that "members shall be graduates in medicine in active practice who are members or eligible for membership in the American Medical Association." There were no dues, only such "special assessments shall be made as will be necessary to defray the expenses of the Society." Meetings were held in members' homes, and dues and refreshments appeared in time. This general plan has been followed through the years with surprisingly few changes.

The subjects of some of the early papers were: (1909) "A Slight Review of Orthopedics" by Dr. Erving, who thought that "joints were immobilized for too long"; (1911) "Caesarean Section" by Dr. Parsons, who favored its more frequent use; and (1914) "Intestinal Perforation in Typhoid Fever" by Dr. Thomas. On another occasion the distinguished gynecologist, Dr. Howard Kelly of Johns Hopkins, spoke on "Radium" with



FOUNDING MEMBERS of the Women's Medical Society of the District of Columbia (left to right): Ada R. Thomas, M.D., Louise Tayler-Jones, M.D., and Mary Parsons, M.D.

comments by Dr. Thomas, who expressed "the earnest wish that the cause of cancer might be found in the next 2 years." In 1919 Dr. Ella Oppenheimer discussed immunization against diphtheria and the legal aspects of enforcing such immunization. "All thought it was a good thing to do when possible."

Interests were not always purely scientific. We have constantly pressed for openings on hospital staffs, gone "to the Hill" for better food and drug laws, and spoken at hearings on laws about such matters as commissions for women in the armed services. Lectures to lay organizations on a variety of subjects are reported in many of the minutes.

In 1934, under Louise Tayler-Jones, we became Branch I of the Medical Women's National Association, now the American Medical Women's Association, which is celebrating its fiftieth anniversary year. This in turn brought us into the Medical Women's International Association. Attendance at conferences of this has taken our members to Manila in the Philippines and to Baden-Baden, Germany. Just this past summer 4 of us joined some 700 women physicians from all over the world at a meeting in Sandefjord, Norway.

Members of Branch I have always been active in the A.M.W.A. as officers and committee members. The 5 national Past Presidents who have been members of the Women's Medical Society of D.C. are Drs. Tayler-Jones, Karpeles, O'Malley, Claire Ryder, and Elizabeth Kahler. Dr. Elizabeth Kittredge was the editor of a periodical entitled *Women in Medicine*, which was the forerunner of the *Journal of the American Medical Women's Association*. She served as guest editor of the November 1951 issue of the J.A.M.W.A., which was compiled of articles by members of Branch I. This was the first of such issues by a given branch and was the beginning of a now traditional series. In this same issue Dr. Lois I. Platt presented "A Statistical Survey" of women doctors in Washington. Dr. Josephine E. Renshaw is now working with a committee of the A.M.W.A. which is undertaking this type of survey on a national basis. Similar surveys are being conducted by and about women doctors in many other countries. When the Medical Women's International Association meets in Rochester, New York in July 1966, presentation of statistics on medical women throughout the world will set the keynote for the conference theme, "The Optimal Use of Medical Womanpower." Dr.

Ryder is one of those responsible for developing a program of interest to the 1,000 women doctors expected to attend this conference.

In November 1958, during the presidency of Dr. Inez Wilber, Branch I was the hostess to the Midwinter Board Meeting of the A.M.W.A. held at the Hotel Woodner. In the spring of 1958 Dr. Aurora Alberti had acted as correspondent to the Pan American Medical Women's Alliance. She arranged a reception at the Pan American Union and sight-seeing tours for the participants when they were in Washington. Other groups or individual foreign women doctors are frequently entertained by our members. Visiting Russian women doctors were invited to an informal buffet supper at the home of Dr. Fredericka Cobey.

Although many of our activities are now of a national and international nature, our major interest is still in the Washington Metropolitan Area. Our concern for young women in medicine is manifested by both advisory and financial assistance. Some of our active members serve as sponsors for the Junior Branches of A.M.W.A. in the local medical schools. Each year a list of the women medical students and house officers is compiled and they are invited to be our guests at a dinner or reception. In lieu of sending flowers or gifts to our members on the customary occasions, a note is written to them indicating that an amount of money has been transferred to the Fellowship Fund in their name. This is used as an emergency fund in case of need by a woman medical student or physician. There is in addition a scholarship fund of the A.M.W.A. which is unique in offering aid to freshmen women medical students.

As opportunities arise we appoint representatives to other community organizations or groups of business and professional women. Membership in the Women's Medical Society of D.C. in no way conflicts with that in the AMA and other local or national medical organizations. It rather provides an opportunity for closer association with other women physicians who, by the pressures of professional life, must forego the morning coffee klatch or the afternoon bridge club but find satisfaction through participating in scientific programs and projects geared to a woman's viewpoint.

ELIZABETH KITTREDGE, M.D.
President, 1934-35

GLORIA G. COCHRAN, M.D.
President, 1964-65

Medicolegal Abstracts

Pharmacist's Liability: When a retail druggist fills a prescription, he warrants that he has used proper care in filling it, that he used proper compounding methods, and that the drug has not been adulterated by some foreign substance. If he fills that prescription with the proper medication in the manufacturer's original sealed package, he is relieved of guaranteeing its fitness for human consumption.

This decision was reached by the Florida Supreme Court in a suit filed against 2 retail druggists by a patient who suffered injuries after taking MER/29®. It is a somewhat confusing situation, since the same court had ruled earlier that a retail grocer does impliedly warrant the food he sells, even though it may be in a sealed container which prevents his inspecting it.

In a Texas court the pharmacist's liability was viewed somewhat differently. That court ruled that a pharmacist is responsible for dispensing precisely what is prescribed even though he has no way of knowing that a substitution may have been made.

The case concerned a druggist who dispensed Elixir of Donnatal® from a stock bottle so marked. Chemical analysis of the medication revealed that it was not Elixir of Donnatal. The pharmacist said that he did not know that there had been a substitution. He testified that his employer had purchased the stock bottle from a wholesaler and presented it to him marked Elixir of Donnatal. He further denied tampering with it or adding anything to it. Nevertheless, he was held guilty of substitution.

The court held that the law places upon the pharmacist the responsibility for dispensing exactly what is prescribed. He is the one with whom the public deals directly, and it is he who must protect that public from fraud, adulteration, or substitution.

M-L

Privileged Communication: The privileged status of communications between patient and physician was reexamined by the Supreme Court of Tennessee.

A patient sued a store's physician for sending a copy of his examination findings to the store's attorney without her consent. The court found in

favor of the physician, indicating that he had no legal obligation not to disclose his findings to a third party.

The court pointed out that under common law there is no privileged status regarding such communications. Only in those states which have enacted statutes specifically granting privilege of communication does any such privilege exist. Tennessee has made attorney-client and husband-wife communications privileged, but not physician-patient communications.

The court observed that medical ethics require preservation of the patient's secrets but that this requirement is not enforceable by law.

COMMENT: Of specific local interest is the fact that the District of Columbia has a rigid statute making physician-patient communications privileged. Maryland, on the other hand, has none.

M-L

Side Rails: A hospital may well be liable if a patient falls from bed when the side rails are not in place.

A patient in Florida was granted damages in a suit against a hospital for injuries she sustained when she fell. She was trying to get out of bed unassisted and fell. The court felt that the evidence was adequate to indicate that the failure to have side rails in place caused the fall.

The patient had pheochromocytoma with dizziness, headaches and instability. Her physician had ordered bed rest. The hospital had not placed bed rails, nor had it instructed her not to get out of bed without assistance.

The evidence showed that it is general nursing procedure in that locality to use bed rails for all patients over 60 years of age. This, along with the hospital's knowledge of the patient's disorder and the doctor's instructions, was enough to uphold the jury's finding of negligence on the part of the hospital.

COMMENT: Cases like this one will no doubt continue to arise. Our continued attention to this one detail of patient care may, however, reduce their frequency.

M-L

Narcotic Prescriptions: A physician in New York was convicted of forgery because he wrote fictitious names upon prescriptions for an addict whose identity he sought to conceal.

The doctor contended that the forgery statute was enacted to discourage the writing of prescrip-

(Continued on page 514)

doing nicely,

thank you. (Father's off somewhere on a cloud.) And thanks to the great advances in medical care in the last 45 years, childbirth today is more an adventure than an ordeal. Pre-natal and post-natal recovery for both mother and child are likewise made easier by some drugs unknown to the profession as little as 10 years ago. In fact, 90% of our 200 most widely used drugs were not in existence before World War II. Should your physician ever prescribe a 'wonder' drug—or any other drug—for you or for any member of your family, Peoples is here to serve you with registered pharmacists on duty seven days a week, 365 days a year.



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OFFICIAL PROGRAM

Thirty-third Annual Scientific Assembly The Medical Society of the District of Columbia

WASHINGTON HILTON HOTEL

Scientific Program

MONDAY MORNING, NOVEMBER 22, 1965
(INTERNATIONAL BALLROOM—EAST)

William S. Cole, M.D., *Presiding*
General Chairman, Thirty-third Annual Scientific Assembly

9:25 Welcome by **Paul R. Wilner, M.D.,**
President, The Medical Society of the
District of Columbia

**9:30 SYMPOSIUM ON MEDICAL AND
SURGICAL MANAGEMENT OF
SOME CARDIOVASCULAR EMER-
GENCIES**

MODERATOR: George A. Kelser, Jr.,
M.D.
Associate Professor of Medicine,
George Washington University
School of Medicine

**CORONARY CARE UNITS: THEIR
POSSIBILITIES AND PROBLEMS**

Samuel M. Fox III, M.D.
Deputy Chief, Heart Disease Con-
trol Program, Division of Chronic
Disease, U. S. Public Health Service

10:00 CARDIAC RESUSCITATION

James R. Jude, M.D.
Professor of Surgery, University of
Miami, Miami, Fla.

10:30 RECESS TO VISIT EXHIBITS

10:50 MANAGEMENT OF ARRHYTHMIAS
Henry D. McIntosh, M.D.

Professor of Medicine and Director
of Cardiovascular Laboratory, Duke
University Medical Center, Durham,
N. C.

**11:20 STATUS REPORT ON IMPLANT-
ABLE PACEMAKERS**

William M. Chardack, M.D.
Associate Professor of Surgery, State
University of New York School of
Medicine, Buffalo, N. Y.

**11:50 SURGICAL TREATMENT OF ACUTE
PULMONARY EMBOLISM**

Arthur C. Beall, M.D.
Assistant Professor of Surgery,
Baylor University College of Medi-
cine, Houston, Texas

12:20 QUESTIONS AND ANSWERS

12:30 RECESS FOR LUNCH—VISIT EXHIBITS

MONDAY AFTERNOON, NOVEMBER 22
(LINCOLN ROOM—EAST AND WEST)

CARDIOVASCULAR EMERGENCIES—PANEL DISCUSSIONS

**2:00 PANEL ON CORONARY CARE
UNITS (LINCOLN ROOM—EAST)**

Darrell C. Crain, M.D., *Presiding*
First Vice President, The Medical
Society of the District of Columbia

MODERATOR: John J. Curry, M.D.
Associate Clinical Director, George-
town University Hospital

Samuel M. Fox III, M.D.

Donald M. Knowlan, M.D.
Assistant Professor of Medicine,
Georgetown University School of
Medicine

Clarence A. Imboden, Jr., M.D.
Deputy Chief, Heart Disease Control
Program, U. S. Public Health Service

**2:00 PANEL ON MANAGEMENT OF
ARRHYTHMIAS — CARDIOVER-
SION AND PACEMAKERS (LINCOLN
ROOM—WEST)**

J. Spencer Dryden, M.D., *Presiding*
Member, Executive Board, The
Medical Society of the District of
Columbia

**MODERATOR: George A. Kelser, Jr.,
M.D.**

Henry D. McIntosh, M.D.

William M. Chardack, M.D.

Charles A. Hufnagel, M.D.
Professor of Surgery and Director
of Surgical Research Laboratory,
Georgetown University Medical Cen-
ter

3:00 RECESS TO VISIT EXHIBITS

PANEL DISCUSSIONS—Continued

**3:30 PANEL ON MANAGEMENT OF
ACUTE PULMONARY EMBOLIZA-
TION (LINCOLN ROOM—EAST)**

**MODERATOR: Kenneth M. Moser,
M.D.**
Assistant Professor of Medicine,
Georgetown University School of
Medicine

Arthur Beall, M.D.

Rashid Massumi, M.D.
Chief Cardiologist, D. C. General
Hospital; Professor of Medicine,
George Washington University School
of Medicine

Comdr. Vernon N. Houk, MC, USN
Chief, Pulmonary Disease Service,
U. S. Naval Hospital, St. Albans,
Long Island, N. Y.

**3:30 PANEL ON CARDIAC RESUSCITA-
TION (LINCOLN ROOM—WEST)**

MODERATOR: Paul C. Adkins, M.D.
Associate Professor of Surgery,
George Washington University School
of Medicine

James R. Jude, M.D.

James M. Bacos, M.D.
Director, Cardiovascular Labora-
tory, Washington Hospital Center

Patricia H. Russell, M.D.
Assistant Professor of Anesthesiol-
ogy, George Washington University
School of Medicine

QUESTIONS AND ANSWERS

5:00 PANEL DISCUSSIONS ADJOURN

TUESDAY MORNING, NOVEMBER 23
(INTERNATIONAL BALLROOM—EAST)

Kenneth L. McCoy, M.D., Presiding

Second Vice President, The Medical Society of the District of Columbia

9:30 CURRENT STATUS OF VACCINATION AGAINST VIRAL DISEASES—PANEL DISCUSSION

Moderator: Saul Krugman, M.D.
Professor and Chairman, Department of Pediatrics, New York University College of Medicine, New York, N. Y.

John J. Witte, M.D.
Deputy Chief, Surveillance Section, Communicable Disease Center, Atlanta, Ga.

Robert H. Parrott, M.D.
Director, Children's Hospital; Clinical Professor of Pediatrics, Georgetown University and George Washington University Schools of Medicine

10:30 RECESS TO VISIT EXHIBITS

11:00 OFFICE DIAGNOSIS OF RESPIRATORY TRACT BACTERIAL INFECTIONS

Captain Andrew M. Margileth, MC, USN
Chief, Pediatric Service, U. S. Naval Hospital

11:20 NEWER DEVELOPMENTS IN ANTI-MICROBIAL THERAPY

Sydney Ross, M.D.
Clinical Professor of Pediatrics, Georgetown University School of Medicine

11:40 PROBLEMS IN PEDIATRIC GYNECOLOGY

Howard W. Jones, Jr., M.D.
Professor of Gynecology, Johns Hopkins University School of Medicine, Baltimore, Md.

QUESTIONS AND ANSWERS

TUESDAY AFTERNOON, NOVEMBER 23
(INTERNATIONAL BALLROOM—EAST)

Duane C. Richtmeyer, M.D., Presiding

Chairman, Executive Board, The Medical Society of the District of Columbia

Moderator: Roland B. Scott, M.D.
Professor of Pediatrics, Howard University College of Medicine

Children's Hospital, Washington D. C.

2:00 PROBLEMS IN RESUSCITATION OF THE NEWBORN

Seymour Alpert, M.D.
Professor of Anesthesiology, George Washington University School of Medicine

2:50 QUESTIONS AND ANSWERS

3:00 RECESS TO VISIT EXHIBITS

3:30 HAZARDS TO THE FETUS AND NEWBORN FROM MATERNAL ILLNESS, MEDICATION AND ANTIBODIES—PANEL DISCUSSION

Moderator: Alexander J. Schaffer, M.D.

Associate Professor of Pediatrics, Johns Hopkins University School of Medicine, Baltimore, Md.

2:20 THE RADIOLOGIST LOOKS AT EMERGENCIES IN THE NEWBORN

Joseph M. LoPresti, M.D.
Chief, Department of Radiology,

Gordon B. Avery, M.D.

Assistant Professor of Pediatrics, Georgetown University School of Medicine; Director, Newborn Service, Children's Hospital, Washington, D. C.

Ernest W. Lowe, M.D.

Chief Medical Officer in Obstetrics and Gynecology, D. C. General Hos-

pital; Assistant Professor of Obstetrics and Gynecology, Howard University College of Medicine

Artemis P. Simopoulos, M.D.

Assistant Professor of Pediatrics, George Washington University School of Medicine

5:00 ADJOURNMENT

WEDNESDAY MORNING, NOVEMBER 24

REFRESHER COURSES

FAMILY PLANNING AND COUNSELING

(JEFFERSON ROOM)

James A. Dusbabek, M.D., *Presiding*

President, Washington Gynecological Society

MODERATOR: Benedict J. Duffy, Jr., M.D.

Consultant for Population Program, Agency for International Development, U. S. State Department

9:30 POPULATION CONTROL—PHYSICIAN RESPONSIBILITY

Benedict J. Duffy, Jr., M.D.

9:40 PREMARITAL COUNSELING

Jed W. Pearson, M.D.

Assistant Clinical Professor of Obstetrics and Gynecology, George Washington University School of Medicine

10:00 MARRIAGE COUNSELING

Leon Yochelson, M.D.

Professor and Chairman of the Department of Psychiatry, George Washington University School of Medicine

10:20 QUESTIONS AND ANSWERS

10:30 RECESS TO VISIT EXHIBITS

10:50 THE USE OF ORAL CONTRACEPTIVES

Robert B. Nelson, M.D.

Chairman, Department of Gynecology, Washington Hospital Center

11:10 TEMPERATURE-RHYTHM METHOD OF FAMILY PLANNING

George E. Stevens, M.D.

Associate Clinical Professor of Obstetrics and Gynecology, Georgetown University School of Medicine

11:30 THE USE OF INTRAUTERINE DEVICES

Thomas A. Wilson, M.D.

Assistant Clinical Professor of Obstetrics and Gynecology, George Washington University School of Medicine

11:50 QUESTIONS AND ANSWERS

BASIC PRACTICAL CONSIDERATIONS IN THE RECOGNITION AND MANAGEMENT OF THE PATIENT WITH PULMONARY DISEASE

(INTERNATIONAL BALLROOM—EAST)

Robert J. Coffey, M.D., *Presiding*

President-elect, The Medical Society of the District of Columbia

RECOGNITION OF THE PROBLEM

9:30 FUNDAMENTALS OF INTERPRETATION OF THE CHEST X-RAY

Roy Greening, M.D.

Professor of Radiology, Jefferson Medical College Hospital, Philadelphia, Pa.

EVALUATION OF THE LESION

10:15 THE ASSESSMENT OF PULMONARY DYSFUNCTION INCLUDING PRE-OPERATIVE EVALUATION

Hall G. Canter, M.D.

Assistant Chief of Medical Service, Veterans Administration Hospital, Washington, D. C.

10:30 RECESS TO VISIT EXHIBITS

11:00 MEDICAL DIAGNOSTIC EVALUATION

Sol Katz, M.D.

Chief of Medical Service, Veterans Administration Hospital; Professor of Medicine, Georgetown University School of Medicine

11:15 SURGICAL PROCEDURES

Joseph W. Peabody, Jr., M.D.

Clinical Assistant Professor of Surgery (Thoracic), Georgetown University School of Medicine

THERAPEUTIC PRINCIPLES

11:30 RATIONAL TREATMENT OF PULMONARY INFECTIONS

Christopher M. Martin, M.D.

Director, Oncology Service, Georgetown Medical Division, D. C. General Hospital; Associate Dean, Georgetown University School of Medicine

11:45 NONSURGICAL TREATMENT OF PULMONARY NEOPLASMS

Bruce I. Shnider, M.D.

Director, Oncology Service, Georgetown Medical Division, D. C. General Hospital; Associate Dean, Georgetown University School of Medicine

12:00 CHANGES IN THE TREATMENT OF TUBERCULOSIS, THE INCREASING RESPONSIBILITY OF THE PRACTITIONER

Robert F. Donohoe, M.D.

Chief Medical Officer, Pulmonary Service, D. C. General Hospital; Associate Professor of Medicine, Georgetown University School of Medicine

12:15 QUESTIONS AND ANSWERS

MODERATOR: Sol Katz, M.D.

PANEL: All Participants

SCIENTIFIC PROGRAM APPROVED BY AACP

This ASSEMBLY's Program has been approved by the AMERICAN ACADEMY OF GENERAL PRACTICE for its members for a maximum of 15 hours' credit under Category I.

Medical Motion Pictures

MONDAY, NOVEMBER 22, 9 A.M. to 5 P.M.
TUESDAY, NOVEMBER 23, 9 A.M. to 5 P.M. and 7 P.M. to 9:30 P.M.

GEORGETOWN ROOM

<i>Time</i>	<i>Title</i>	<i>Source</i>
9:00 a.m.	ABNORMAL CERVICAL SPINE MOTION AS STUDIED BY CINERADIOGRAPHY	Gerald Schuster, M.D., and Gunter J. Augustin, M.D., Department of Radiology, Washington Hospital Center
9:20 a.m.	DIAGNOSIS AND TREATMENT OF HYPERPARATHYROIDISM	Robert J. Coffey, M.D., Washington, D.C.
9:42 a.m.	TESTIS TUMORS	David M. Seitzman, M.D., and Clarence B. Hewitt, M.D., U. S. Army, Walter Reed Army Hospital
10:07 a.m.	IN VIVO PLATELET BEHAVIOR IN SMALL BLOOD VESSELS	H. C. Kwaan, M.D., M.R.C.P., Fan Hardings, and Tage Astrup, Institute of Medical Research, James F. Mitchell Foundation, Washington, D.C.
10:30 a.m.	RECESS TO VISIT EXHIBITS	
11:00 a.m.	EXPERIMENTAL PANCREATITIS	Gordon McHardy, M.D., Browne-McHardy Clinic, New Orleans, La.
11:16 a.m.	ROENTGEN ANATOMY OF THE NORMAL HEART	American College of Radiology
11:35 a.m.	IDENTIFICATION OF EARLY SYPHILIS	American Medical Association
12:00 noon	RECESS FOR LUNCH AND VISIT EXHIBITS	
1:00 p.m.	CHRONIC BRONCHITIS AND EMPHYSEMA	Wayne State University
1:34 p.m.	PSYCHIATRIC SERVICES IN GENERAL HOSPITALS	American Hospital Association
1:59 p.m.	COLOSTOMY MANAGEMENT	Michigan Cancer Foundation, Inc.
2:14 p.m.	PHYSICAL DIAGNOSIS—THE ABDOMEN IN INFANTS AND CHILDREN	Wayne State University
2:46 p.m.	LASER BEAM THERAPY	The Children's Hospital Research Foundation, Cincinnati, Ohio
3:00 p.m.	RECESS TO VISIT EXHIBITS	

Medical Motion Pictures—Continued

<i>Time</i>	<i>Title</i>	<i>Source</i>
3:30 p.m.	FEMALE PSEUDOHERMAPHRODITISM DUE TO ADRENOGENITAL SYN- DROME	Ascher L. Mestel, M.D., Brooklyn, N.Y.
3:43 p.m.	INTENSIVE CARE	Public Health Service Audiovisual Fa- cility
4:01 p.m.	THE OBSTETRIC MANAGEMENT OF THE RH-NEGATIVE MOTHER	Johnson and Johnson, Pty., Ltd., Sydney, Australia
4:16 p.m.	INTRAUTERINE DEVICE—THE GYNE- COIL	Robert J. Sherman, M.D., Washington, D.C.
4:31 p.m.	THE WASTED ONES	George Washington University Airlie Center, Warrenton, Va.

The Scientific Exhibit

ALL EXHIBITS OPEN FROM 9 A.M. TO 5 P.M. DAILY

EXHIBITION HALL

Space 1-S

LASER—A SURGICAL TOOL

Paul E. McGuff, M.D., Ph.D., Children's
Hospital, Cincinnati, Ohio

Space 2-S

**PERIPHERAL CONGENITAL ARTERIO-
VENOUS FISTULAS**

D. Emerick Szilagyi, M.D., J. P. Elliott, M.D.,
Roger F. Smith, M.D., F. J. DeRusso, M.D.,
Henry Ford Hospital, Detroit, Mich.

Space 3-S

AIR, WATER, RADIATION

Bureau of Public Health Engineering, Depart-
ment of Public Health, Government of the
District of Columbia

Space 4-S

**A CORONARY CARE UNIT IN YOUR HOS-
PITAL**

Heart Disease Control Program, U. S. Public
Health Service

Space 5-S

**ORAL THERAPY IN DIABETIC MANAGE-
MENT**

James M. Moss, M.D., Alexandria, Va.; Sidney
A. Tyroler, M.D., Arlington, Va.; Edward J.
Gallagher, M.D., Fairfax, Va.; Carlton P.
Alexis, M.D., and DeWitt E. DeLawter,
M.D., Washington, D. C.

Space 14-S

WOMEN IN MEDICINE

Carolyn S. Pincock, M.D., and Petrena Abbe
Shea, M.D., Branch One—American Medi-
cal Women's Association, Washington, D. C.

Space 15-S

**VALUE OF BRONCHOGRAPHY WHEN
BRONCHOSCOPY FAILS**

Department of Public Health, Government of
the District of Columbia: M. F. Taleghani,
M.D., Pulmonary Disease Service, D. C.
General Hospital

Space 16-S

MANAGEMENT OF GYNECOLOGIC CANCER BY CHEMOTHERAPY

Jeanne C. Bateman, M.D., and Harry N. Carlton, M.D., Washington, D. C.

Space 17-S

GOLD LEAF IN SURGERY (NEUROSURGERY)

John P. Gallagher, M.D., Washington, D. C.

Space 18-S

INHALATION THERAPY—DYNAMIC ARM OF ANESTHESIOLOGY

Colonel John A. Jenicek, MC, Chief of Anesthesia and Operative Service, and Mr. Leslie Freedman, Walter Reed General Hospital; Lt. Colonel Timothy Barila, MC, and Major James A. Meyer, MC, Walter Reed Army Institute of Research

Space 33-S

MEDICAL ASPECTS OF TUBERCULOSIS CONTROL

Radiological Health Division, Bureau of Public Health Engineering, D. C. Department of Public Health

Space 39-S

GROUP A STREPTOCOCCUS IDENTIFICATION

Rheumatic Fever Program, Bureau of Chronic Disease Control, D. C. Department of Public Health

Space 43-S

ORAL CONTRACEPTIVES IN PLANNED PARENTHOOD

Robert B. Nelson, M.D., Medical Director, Planned Parenthood of Metropolitan Washington

Space 50-S

FDA'S ADVERSE REACTION REPORTING PROGRAM

Bureau of Medicine, Food and Drug Administration

Space 55-S

PRIMARY IDIOPATHIC MYOCARDIAL DISEASE

Gerald I. Shugoll, M.D., Chief, Cardiology Service, and Patrick J. Bowen, M.D.,

Veterans Administration Hospital, Washington, D. C.

Space 67-S

RHEUMATIC FEVER AND RHEUMATIC HEART DISEASE ON CAMPUS

Heart Disease Control Program, U. S. Public Health Service

Space 84-S

EVERY PHYSICIAN'S HOSPITAL

Jack Masur, M.D., Director, Clinical Center, National Institutes of Health

Space 99-S & 100-S

CONTRAST INFUSION NEPHROPYELOGRAPHY

M. Pinson Neal, Jr., M.D., and T. R. Howell, M.D., Department of Radiology, Medical College of Virginia

Space 101-S

AIDS IN DIABETIC MANAGEMENT

DeWitt E. DeLawter, M.D., Washington, D. C., James M. Moss, M.D., Alexandria, Va., and Marian Korczowski, M.S., Arlington, Va.

Space 102-S & 103-S

BLOOD COMPONENT THERAPY

American National Red Cross, Mrs. Charlotte A. Enten, Exhibit Specialist, Office of Public Information

Space 104-S & 105-S

WHAT ARE YOU DOING TO CONTROL ORAL CANCER?

Richard Hayes, D.D.S., Cancer Control Branch, U. S. Public Health Service

Space 106-S

GOUT—DIAGNOSIS, PATHOGENESIS, TREATMENT

J. E. Seegmiller, M.D., National Institutes of Health

Space 107-S

CARDIAC VALVULAR REPLACEMENT BY A UNIVERSAL DISC VALVE

Charles A. Hufnagel, M.D., John F. Gillespie, M.D., and Peter W. Conrad, M.D., Georgetown University Hospital

Space 108-S

ALLERGIC DISORDERS IN NEGRO CHILDREN

Roland B. Scott, M.D., Teoman Saracli, M.D., and Angella D. Ferguson, M.D., Department of Pediatrics, Howard University College of Medicine

Space 109-S

FUNCTIONAL EXTRACELLULAR WATER MEASURED WITH SODIUM SELENATE (⁷⁵Se)

Solomon N. Albert, M.D., Chalom A. Albert, M.D., Erwin F. Hirsch, M.D., Ira N. Brecher, M.D., and Paul Numerof, Sc.D., Department of Anesthesiology, Washington Hospital Center

Space 110-S

LYMPIOGRAPHY: ITS USE IN THE DIAGNOSIS, STAGING AND TREATMENT OF LYMPHIOMAS

Warren J. Nelson, M.D., Crandal Alford, M.D., and Neofytos Tsangaris, M.D., George Washington University Hospital

Space 111-S

ADVANCES IN AMBULATION, HAND SKILLS, SPEECH AND SOCIALIZATION IN CHILDREN WITH BRAIN DAMAGE WHO WERE TRAINED IN A SCHOOL AND THERAPY PROGRAM

William P. Argy, M.D., Medical Director, D. C. Society for Crippled Children

Space 112-S

TREATMENT OF SKIN AND SOFT TISSUE ULCERS WITH SUGAR

James W. Barnes, Jr., M.D., Glenn Dale Hospital, Glenn Dale, Md.

Space 113-S

NEPHROTOMOGRAPHY

Richard P. Karpawich, M.D., Gunter J. Augus-

tin, M.D., and Gregory T. Henesy, M.D., Washington Hospital Center

Space 114-S

INTRAVENOUS FLUID THERAPY IN THE MANAGEMENT OF NEONATAL HYPERBILIRUBINEMIA

Paul B. Garcia, M.D., Kenneth L. McCoy, M.D., and Jorge B. Morales, M.D., Providence Hospital, Washington, D.C.

Space 115-S

MUSHROOM POISONING

Captain E. W. Bird, MC, USN, Lt. Comdr. Henry B. Lowsma, MC, USN, and Comdr. Pierre Niaussat, French Navy, Naval Medical School, National Naval Medical Center

Space 116-S

PSEUDARTHIROSIS IN FEMORAL FRACTURES IN YOUNG RATS

Department of Public Health, Government of the District of Columbia, and Robert C. Kindred, M.D., Chief Medical Officer in Orthopedics, D. C. General Hospital

Space 117-S

THE VALUE OF VENACAVOGRAPHY

Captain E. W. Bird, MC, USN, and Captain L. T. Brown, MC, USN, U. S. Naval Hospital, National Naval Medical Center

Space 118-S

ISOLATION OF THE RECTUM IN OBSTETRICS AND SURGERY

Christopher J. Murphy, M.D., John J. O'Connor, M.D., and Jean E. DeVries, R.N., Alexandria, Va.

Space 119-S

INTRAUTERINE FETAL SURGERY

Captain Keith L. Kraner, VC, USAF, First Lt. Philip B. Conran, VC, USA, and Arthur M. Silverstein, Ph.D., Armed Forces Institute of Pathology

CONCOURSE

PROJECT HOPE: U. S. AT ITS BEST

William B. Walsh, M.D., President, Project Hope

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American Cancer Society, D. C. Division

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MEDICAL SERVICE OF D. C.—THE DOCTORS' PLAN

The Technical Exhibit

THE EXHIBITION HALL

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	<i>Booth No.</i>		<i>Booth No.</i>
ABBOTT LABORATORIES North Chicago, Illinois	92	Oxygen and Equipment Company, Inc., Washington, D. C.	
ALOE MEDICAL DIVISION OF BRUNSWICK St. Louis, Missouri	91	CARNATION COMPANY Los Angeles, California	46
ARCUM PHARMACEUTICAL CORPORATION Vienna, Virginia	22	CARNICK LABORATORIES Summit, New Jersey	49
ARNAR-STONE LABORATORIES, INC. Mt. Prospect, Illinois	80	CIBA PHARMACEUTICAL COM- PANY Summit, New Jersey	58 & 59
ASTRA PHARMACEUTICAL PRODUCTS, INC. Worcester, Massachusetts	89	THE COCA-COLA COMPANY Atlanta, Georgia	45
AYERST LABORATORIES Division of American Home Products Corp., Arlington, Virginia	81	CUTTER LABORATORIES Bel Air, Maryland	31
BETH-MONT SURGICAL SUPPLY COMPANY Bethesda, Maryland	9	DANNON MILK PRODUCTS Long Island City, New York	67
BEUCHLER'S, INC. Washington, D. C.	61	DAVIES, ROSE-HOYT Needham, Massachusetts	38
THE BIRTCHER CORPORATION Los Angeles, California	10	DOME CHEMICALS, INC. New York, New York	24
BOYCE & LEWIS, INC. Washington, D.C.	57	ELECTRODYNE COMPANY, INC. Westwood, Massachusetts	90
BRISTOL LABORATORIES Syracuse, New York	4	ELI LILLY & COMPANY Indianapolis, Indiana	21
BROOKS MARKET RESEARCH Hanover, New Jersey	65	ENCYCLOPAEDIA AMERICANA CORPORATION Beverly Hills, California	32
BURROUGHS WELLCOME & COM- PANY (U.S.A.), INC. Tuckahoe, New York	82	ENCYCLOPAEDIA BRITANNICA Chicago, Illinois	11
BURTON, PARSONS & COM- PANY, INC. Washington, D. C.	20	FLINT LABORATORIES Morton Grove, Illinois	6
CAPITAL CREDIT CORPORATION Washington, D. C.	2	E. FOUGERA & COMPANY, INC. Hicksville, New York	30
CAPITAL HOSPITAL SUPPLY COMPANY Division of Hospital, Ambulance,	35	GEIGY PHARMACEUTICALS Yonkers, New York	60
		NELSON KLOMAN SURGICAL SUPPLY COMPANY Washington, D. C.	12
		KNOLL PHARMACEUTICAL COM- PANY Orange, New Jersey	13

The Technical Exhibits—Continued

	<i>Booth No.</i>		<i>Booth No.</i>
LEDERLE LABORATORIES	36	A. H. ROBINS COMPANY	69
Pearl River, New York		Richmond, Virginia	
LOMA LINDA FOODS	68	ROCHE LABORATORIES	29
Riverside, California		Nutley, New Jersey	
J. B. LIPPINCOTT COMPANY	34	ROSS LABORATORIES	93
Philadelphia, Pennsylvania		Columbus, Ohio	
MAXWELL & TENNYSON, INC.	40	SANDOZ PHARMACEUTICALS	47
Washington, D. C.		Hanover, New Jersey	
MEAD JOHNSON LABORATORIES	70	W. B. SAUNDERS COMPANY	23
Evansville, Indiana		Philadelphia, Pennsylvania	
MEDCO PRODUCTS COMPANY	76	SCHERING CORPORATION	8
Baltimore, Maryland		Union, New Jersey	
MEDICAL-DENTAL BUSINESS RE- SEARCH FOUNDATION, INC.	7	G. D. SEARLE & COMPANY	1
Washington, D. C.		Chicago, Illinois	
MERCK SHARP & DOHME	97	SHERMAN LABORATORIES	37
West Point, Pennsylvania		Detroit, Michigan	
THE MUTUAL BENEFIT LIFE IN- SURANCE COMPANY	56	SMITH, KLINE & FRENCH LAB- ORATORIES	27
Washington, D. C.		Philadelphia, Pennsylvania	
ORTHO - PHARMACEUTICAL CORPORATION	72	E. R. SQUIBB & SONS	53
Raritan, New Jersey		New York, New York	
PEOPLES DRUG STORES, INC.	28	STIEFEL LABORATORIES, INC.	83
Washington, D. C.		Oak Hill, New York	
PEPSI-COLA BOTTLING COM- PANY	26	THE STUART COMPANY	71
Cheverly, Maryland		Pasadena, California	
PFIZER LABORATORIES	42	SYNTEX LABORATORIES, INC.	74
New York, New York		Palo Alto, California	
PHYSIONIC ENGINEERING, INC.	75	THE UPJOHN COMPANY	44
Longmont, Colorado		Kalamazoo, Michigan	
WILLIAM P. POYTHRESS & COM- PANY, INC.	41	U. S. VITAMIN & PHARMACEU- TICAL CORPORATION	5
Richmond, Virginia		New York, New York	
PROFESSIONAL BUSINESS MAN- AGEMENT	54	WALLACE LABORATORIES	64
Washington, D. C.		Cranbury, New Jersey	
RAMAR HEALTH PRODUCTS COMPANY	52	WHITE LABORATORIES, INC.	48
Broomall, Pennsylvania		Kenilworth, New Jersey	
RIKER LABORATORIES	25	THE WILLIAMS & WILKINS COM- PANY	51
Northridge, California		Baltimore, Maryland	
		WTS-PHARMACRAFT	3
		Rochester, New York	
		WYETH LABORATORIES	66
		Philadelphia, Pennsylvania	

Anatomy of Low Back Pain #1



**the sedentary life
is often the seat of
low back pain**

The human spine is not engineered for prolonged sitting at desks, pianos, typewriters and drafting boards. The stresses set up by the heavy, forward-tilted head and trunk, balanced precariously on an insufficient base, result in strain of the dorsal musculature, particularly at the low lumbar level.

The unusual muscle-relaxant and anesthetic properties of 'Soma' make it especially useful in the treatment of low back sprains and strains. 'Soma' is widely prescribed ☐ to relieve pain ☐ to relax muscles ☐ to restore mobility.

Indications: 'Soma' is useful for management of muscle spasm, pain, and stiffness in a variety of inflammatory, traumatic, and degenerative musculoskeletal conditions. It also may act to normalize motor activity in certain neurologic disturbances.

Contraindications: Allergic or idiosyncratic reactions to carisoprodol.

Precautions: 'Soma', like other central nervous system depressants, should be used with caution in patients with known propensity for taking excessive quantities of drugs and in patients with known sensitivity to compounds of similar chemical structure, e.g., meprobamate.

Side Effects: The only side effect reported with a frequency is sleepiness, usually on higher than recommended doses. An occasional patient may not tolerate carisoprodol because of an individual reaction, such as a sensation of weakness. Other rarely observed reactions have included dizziness, ataxia, tremor, agitation, irritability, headache, increase in eosinophil count, flushing of face, and gastrointestinal symptoms.

One instance each of pancytopenia and leucopenia, occurring when carisoprodol was administered with other drugs, has been reported, as has an instance of fixed drug eruption with carisoprodol and subsequent cross reaction to meprobamate. Rare allergic reactions, usually mild, have included one case each of anaphylactoid reaction with mild shock and angioneurotic edema with respiratory difficulty, both reversed with appropriate therapy. In cases of allergic or hypersensitivity reaction, carisoprodol should be discontinued and appropriate therapy initiated. Suicidal attempts may produce coma and/or mild shock and respiratory depression.

Dosage: Usual adult dose is one 350 mg. tablet three times daily and at bedtime.

Supplied: Two Strengths: 350 mg. white tablets and 250 mg. orange, two-piece capsules.

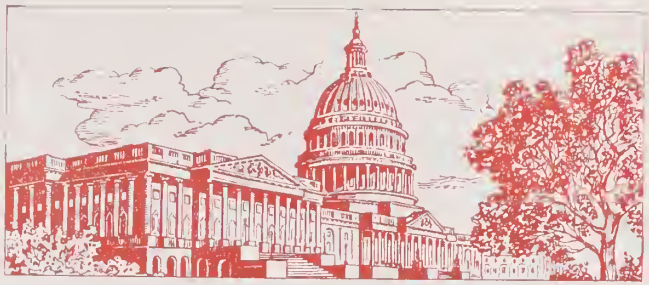
Before prescribing, consult package circular.

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of low back
sprains and strains**

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NEWS & PERSONALS

Summary of Executive Board Actions

The Executive Board of the Medical Society of the District of Columbia held its regular meeting, August 23, 1965 at the Statler Hotel. Duane C. Richtmeyer, Chairman, presided. Present were: Robert J. Coffey, Karl C. Corley, Darrell C. Crain, J. Spencer Dryden, Raymond T. Holden, Kenneth L. McCoy, Paul R. Wilner, and Mr. George W. Cooley, Secretary. Also present were Warren D. Brill, Chairman, Committee on Public Information and Education, and Mr. Lou Brott, Public Relations Representative.

Committee Meetings: The following meetings were listed by the Secretary as having been held since the Board last met:

- | | | |
|--------|----|---|
| July | 27 | Grievance Committee |
| | 28 | Liaison Committee with Federal Agencies |
| August | 2 | Subcommittee of Medicolegal Committee with St. Paul Insurance Company Representatives re Professional Liability Insurance |
| | 5 | Traffic Committee |
| | 6 | Fee Review Committee |
| | 12 | Cancer Study Committee |
| | 13 | Committee on Child Welfare |
| | 16 | Meeting re Speakers Bureau |
| | 18 | Meeting re Presentation of Awards at Scientific Assembly |
| | 20 | House and Building Fund Committee |

Board of Credentials: The following recommendations of the Board of Credentials were approved:

Active Member

Albert I. Holtz, 4360 Barnabas Road, S.E.

Associate Member

Kang Ok Cho, 3800 Reservoir Road, N.W.

Transfers

Active to Associate: Neel J. Price and Howard P. Treichler

Resident-Intern to Associate: Howard G. McQuarrie

Progress Report—Public Relations: Dr. Brill spoke briefly on the Committee's work and

then called on Mr. Brott, who presented a 6-point outline of Public Relations activities.

1. D. C. Legislation. In following up a suggestion that some publicity be obtained at the time the President signs into law the Good Samaritan and Child Abuse bills, Mr. Brott noted that such a possibility did exist and that he would determine how, when and where. It was voted to request permission to have representatives present at the signing of these bills, such representatives to include President Wilner and his designees.

2. Community Health Week. Mr. Brott presented his tentative plans for Community Health Week (November 7-13) for which the theme is "Teaming Up for Better Health." His outline on these points was discussed in detail, including the scope of an initial program of this type and the key subject on which to concentrate. Both venereal disease and health careers were suggested. The Board authorized the Committee on Public Information and Education to undertake a project in connection with Community Health Week, with details to be left to Dr. Brill, Mr. Brott, and the Committee.

3. Scientific Assembly Publicity and Medicare. Mr. Brott referred briefly to plans for publicity for the SCIENTIFIC ASSEMBLY and the Q & A material relative to health care for the aged.

4. Health Fair Proposal. In reference to a proposal for a Health Fair, it was suggested that Dr. W. Ross Morris be contacted since this had been proposed several years ago and he had been assigned to work on it. The President was requested to appoint a committee to consider the feasibility of conducting a Health Fair in the spring of 1967, or some other appropriate date, and report back to the Executive Board.

5. Cafritz Memorial Hospital. A suggested letter to be sent to the membership in regard to Cafritz Memorial Hospital was distributed and re-

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viewed. The letter is to be on the Hospital's stationery and signed by Mr. E. Brooke Lee, Jr., Chairman of the Fund Campaign. The use of the Society's mailing list for the purpose of mailing this letter was approved.

6. Society Awards. A memorandum from the Subcommittee to Select Nominees for Society Awards was distributed and the following recommendations of the Subcommittee were approved: Community Service Award: Preston A. Melendon, M.D.

Certificate for Meritorious Service: J. Bay Jacobs, M.D., C. K. Fraser, M.D., and Eloise W. Kailin, M.D.

John Benjamin Nichols Award: Kiwanis Club of Washington, D.C.

New Society Headquarters:

A. Financing: The following recommendations from a subcommittee of the House and Building Fund Committee were approved:

1. For the present the projected \$500,000 loan should be financed from rental income and the sale of 1710-18 M Street.
2. No special assessment should be made at this time because income will be sufficient to finance the loan and it would arouse resentment of many members.
3. New furnishings should be provided for nonoffice personnel areas and financed

through voluntary contributions or donations.

4. If necessary, borrowed funds should be used for all or part of the costs of "3" above, and if contributions are not sufficient to cover the costs after 1 year, a special assessment should be levied.

B. Cornerstone-laying Ceremonies: It was agreed that the President should select a committee to handle the ceremonies for the laying of the cornerstone; that this should be held early in October, with the committee establishing the exact date.

Committee on Constitution and By-laws:

A report from the Committee with suggested revisions to be voted on by the membership in November was considered and approved.

Parking Privileges: The President gave an oral report on the progress being made. In response to a proposal made to the District Commissioners, he had received notice that they were appointing a committee to look into parking problems for certain groups and requested a representative from the Medical Society to serve on that committee. Dr. Wilner stated that he had selected Dr. Edward W. Nicklas as the Society's representative.

Gundersen Report: The written comments of the Society's delegates concerning this Report were approved for forwarding to Dr. Gundersen and such other use the delegates may feel indicated.

Cancer Study Committee: The following recommendation of this Committee was approved: "That a rectal and sigmoid morbidity study be investigated and that a grant application be prepared for the purpose of requesting funds from the D. C. Cancer Society."

Other Business: Nonimees to Nominating Committee were approved.

Date of Annual Business Meeting was set for Sunday, November 21 or November 14, 1965 at the discretion of the President.

An application from Del Ray Medical Laboratory for an exhibit at the ASSEMBLY was rejected at this time because the matter of the use of such laboratories is under investigation by the Committee on Medical Ethics and Professional Conduct.

A proposed advertisement on a device to eliminate tar from cigarettes was presented. The Board voted not to accept advertisements of this type for publication in the MEDICAL ANNALS.

Tetanus antitoxin: The Secretary reported the following response from the AMA concerning

this: "Council on Drugs monograph just approved indicated that human tetanus immune globulin is preferred to antitoxins obtained from nonhuman sources." In view of the stand taken by the AMA it was decided to send this resolution back to the Section on Allergy for modification.

There being no further business, the meeting was adjourned.

Meetings

The 200th anniversary of medical education in the United States will be observed in Philadelphia as the **American Medical Association** convenes for its **19th Clinical Convention**, November 28–December 1. The Convention is being held in conjunction with the bicentennial observance of the Nation's oldest medical school, the University of Pennsylvania School of Medicine.

The Seventh National Conference on the Medical Aspects of Sports will convene the first day of the meeting, November 28, in the Benjamin Franklin Hotel. It will be of special interest to high school and college team physicians. Dr. James Z. Appel, President of the AMA, will speak on "Sports Medicine in Perspective" at a luncheon meeting.

Twelve fireside conferences will be held Sunday evening, November 28, at the Warwick Hotel. They will be sponsored jointly by the AMA and the American College of Chest Physicians.

Attending the sessions from Washington will be the Society's delegates to the American Medical Association, Dr. Raymond T. Holden and Dr. C. Willard Camalier, Jr., and Mr. George Cooley, Secretary of the Society. It is expected that a large number of Washington physicians will be present at various sessions.

The Association of Military Surgeons of the United States will emphasize "better teamwork and medical service management for better patient care" when it holds its **72nd Annual Meeting** at the Washington Hilton Hotel, November 15–17.

Dr. A. B. C. Knudson is General Chairman of the meeting. Dr. Knudson is Director of Physical Medicine and Rehabilitation Service for the Veterans Administration.

The opening address of the Convention will be given by Dr. Jack Masur, Assistant Surgeon General and Director of the Clinical Center of the National Institutes of Health.

A relatively new addition to the armamentarium of modern medicine is the laser beam. What lasers are and how they can be applied to scientific and military purposes will be discussed by Dr. E. H. Zeitler and Lt. Commander John R. Hayes, of the Armed Forces Institute of Pathology, Dr. John L. Fox, of the Veterans Administration Hospital, and Lt. Colonel Donald H. Glew, Jr., of the U. S. Army Research and Development Command. Dr. Fox is an Active member of the D. C. Medical Society.

The International Luncheon and Convocation honoring international guests will be given at noon on the first day.

General News

To lay the groundwork for new health legislation, President Johnson has called a **White House Conference on Health**, November 3–4. George Beadle, Ph.D., President of the University of Chicago, will be Chairman of the Executive Committee to plan for the Conference, and Mr. Boisfeuillet Jones, former Special Assistant to the Secretary of Health, Education, and Welfare, will be Vice Chairman.

The President appointed 5 physicians to the 9-member Committee. They are: Dr. Dwight L. Wilbur, of San Francisco, a member of the Board of Trustees of the American Medical Association; Dr. George James, New York Health Commissioner; Dr. Lowell T. Coggeshall, trustee and former Dean of the Medical School, University of Chicago; Dr. Montague Cobb, Professor of Anatomy, Howard University School of Medicine, and former President of the National Medical Association; and Dr. Michael E. DeBakey, Professor of Surgery, Baylor University. Dr. Cobb is an Active member of the D. C. Medical Society.

The Chief Executive said the purpose of the conference is to bring together "the best minds and the boldest ideas to deal with the pressing health needs of the Nation."

The Washington Academy of Sciences requests nominations for its 1965 Awards for Scientific Achievement. These awards are given in the Biological Sciences, the Engineering Sciences, the Physical Sciences, Mathematics, and the Teaching of Science. The age limit is 40, except for the Teaching Award. The awards are

presented at the Academy's annual dinner meeting in January. Deadline for receipt of nominations is November 12, 1965. For further information call the Academy Office, 234-5323, or the General Chairman of the Awards Committee, Dr. E. A. Mason, Warfield 7-3800, ext. 212.

The American Heart Association has established **2 teaching scholarships in cardiology**, effective early in 1966, as an added step in its long-range program to improve further the level of medical education in the field of cardiovascular disease.

The scholarships will support the recipients for a term of 5 years; each scholarship will carry a base stipend of \$11,000 the first year, with annual increments of \$1,000 up to a maximum of \$15,000. An additional grant of \$1,000 per year will be made to the teacher's institution to cover travel expenses, equipment, and other items for use in teaching.

The Teaching Scholar will work primarily at the undergraduate level of education in the cardiovascular field, devoting the major part of his efforts to teaching. He will be a full-time faculty member, and will not be permitted to derive income from private practice.

Candidates should have completed their residency or fellowship training, but may not be over 40; they must be physicians or medical scientists and citizens of the United States or Canada.

Additional information and application forms may be obtained from Dr. Frederick J. Lewy, Director, Department of Medical Education, American Heart Association, 44 East 23rd Street, New York, N. Y. 10010.

The Chief of the Division of Foreign Quarantine calls attention to the need for **cholera vaccination for international travel**. He states that in recent years cholera has spread from its usual

confines in India and East Pakistan and is currently reported in areas of Afghanistan, Burma, India, Pakistan, Philippines, Thailand, and Vietnam. In addition, a cholera-like disease has been reported in Iran. Persons planning to visit or transit these countries should be vaccinated against cholera since many countries in which cholera is not present may require vaccination against this disease for all persons arriving within 5 days from an infected area; this includes the United States.

In connection with the **IX International Cancer Congress**, which will be held in Tokyo, Japan, October 23-29, 1966, a charter flight and several group flights are contemplated. Members of the immediate family of Congress participants will be eligible for this transportation. Anyone interested should communicate with Dr. Hirsch Marks, 435 East 57th Street, New York 22, N. Y.

The following officers will serve the **Washington Orthopedic Club** for the year 1965-66:

Dr. Robert L. Dow, *President*; Dr. Charles Keck, *Vice President*; and Dr. Joseph O. Romness, *Secretary-Treasurer*.

The Rheumatism Society of the District of Columbia elected the following officers on May 18, 1965:

Dr. Nathan Zvaifler, *President*; Dr. Richard C. Fowler, *Vice President*; and Dr. Jean Harris, *Secretary-Treasurer*.

Dr. Roy Hertz has been appointed **Scientific Director of the National Institute of Child Health and Human Development**. For many years Dr. Hertz has been Chief of the Endocrinology Branch of the National Cancer Institute.

The American College of Cardiology has removed its national headquarters from New York

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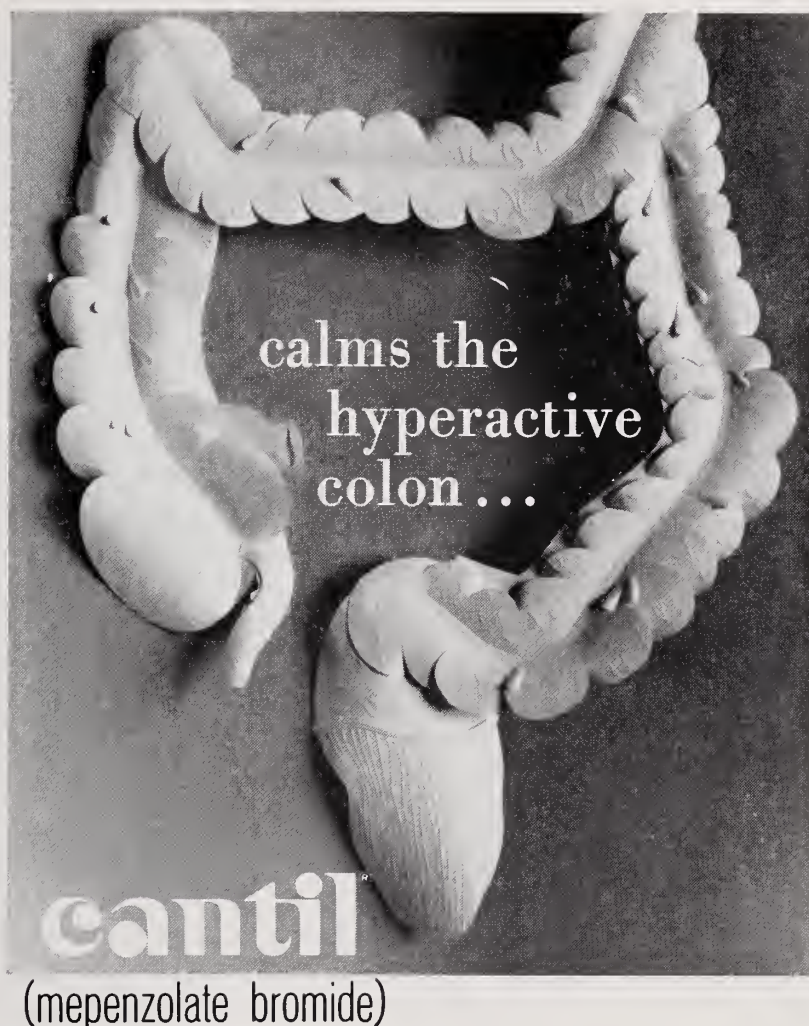
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One or two tablets three times a day and one or two at bedtime usually provide prompt relief. Cantil with Phenobarbital may be prescribed if sedation is required.

Dryness of the mouth or blurring of vision may occur but it is usually mild and transitory. Urinary retention is rare. Caution should be observed in prostatic hypertrophy—withhold in glaucoma. Cantil with Phenobarbital is contraindicated in patients sensitive to phenobarbital.

Supplied: CANTIL (mepenzolate bromide)—25 mg. per scored tablet. Bottles of 100 and 250.

CANTIL with PHENOBARBITAL—containing in each scored tablet 16 mg. phenobarbital (warning: may be habit forming) and 25 mg. mepenzolate bromide. Bottles of 100 and 250.

¹-Riese, J.A.: Amer. J. Gastroent. 28:541 (Nov.) 1957



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Milwaukee, Wisconsin 53201

City to 9650 Rockville Pike, Washington, D. C. 20014; telephone 656-7282.

Mr. William D. Nelligan has succeeded Dr. Philip Reichert as Executive Director of the College. For 10 years Mr. Nelligan was Director of Postgraduate Medical Education at the University of Kansas. Recently he has been Director of the Department of Continuing Education and Director of Development at the Medical College of Georgia. He assumed his new duties on July 1, 1965.

"Shingles—Hope through Research" is a new publication prepared by the National Institute of Neurological Diseases and Blindness for public information. It warns of complications that can result from shingles and advises victims of the disease to see their physician. Single copies may be obtained free of charge from the Information Office of the Institute, Bethesda, Md. 20014.

Personals

Dr. John P. Gallagher. Clinical Associate Professor of Neurosurgery at Georgetown University School of Medicine, was awarded the Order de Mayo, Argentina's second highest civilian award, in Buenos Aires the early part of August. The award was made following the successful operation on an aneurysm suffered by Maria Antonia Tejedor, star of motion pictures and television. The operation involved the use of a pilojector, in the invention of which Mr. Harrison P. Hagemeyer, a retired employe of the Naval Research Laboratory, collaborated. Mr. Hagemeyer, who served as a technician during the operation, also received the Order de Mayo. Dr. Gallagher and Mr. Hagemeyer were invited to Argentina by President Illa to attempt the operation at the Neurological Institute of Buenos Aires, with the assistance of 2 Argentine surgeons.

Dr. Alvin B. C. Knudson. Associate member of the D. C. Medical Society, was installed as President of the American Academy of Physical Medicine and Rehabilitation at its 27th Annual Assembly in Philadelphia, August 23. The Academy met jointly with the American Congress of Physical Medicine and Rehabilitation, of which Dr. Knudson is Past President.

Dr. Monroe J. Romansky. Professor of Medicine at George Washington University

School of Medicine, has been appointed Associate Chairman of the Department of Medicine.

Correspondence

LYNCHBURG, VIRGINIA, August 31, 1965

SENATOR PHILIP A. HART

SENATE ANTITRUST AND MONOPOLY SUBCOMMITTEE
WASHINGTON 25, D. C.

DEAR SENATOR HART:

In my statement on August 5, 1965, before your Subcommittee on Antitrust and Monopoly, I stated as follows:

"Washington, D. C., the Nation's Capital, had long been considered an oasis—a place where ethical doctors were in control. But even here, we begin to note a gradual slippage."

I wish to correct the record to show that there has been no slippage in the District of Columbia itself and to compliment the D. C. Ophthalmological Society for its vigorous leadership in this area.

Sincerely,

A. G. JEFFERSON

*Chairman, Executive and Ethics
Committee, Guild of Prescription
Opticians of America, Inc.*

Obituaries

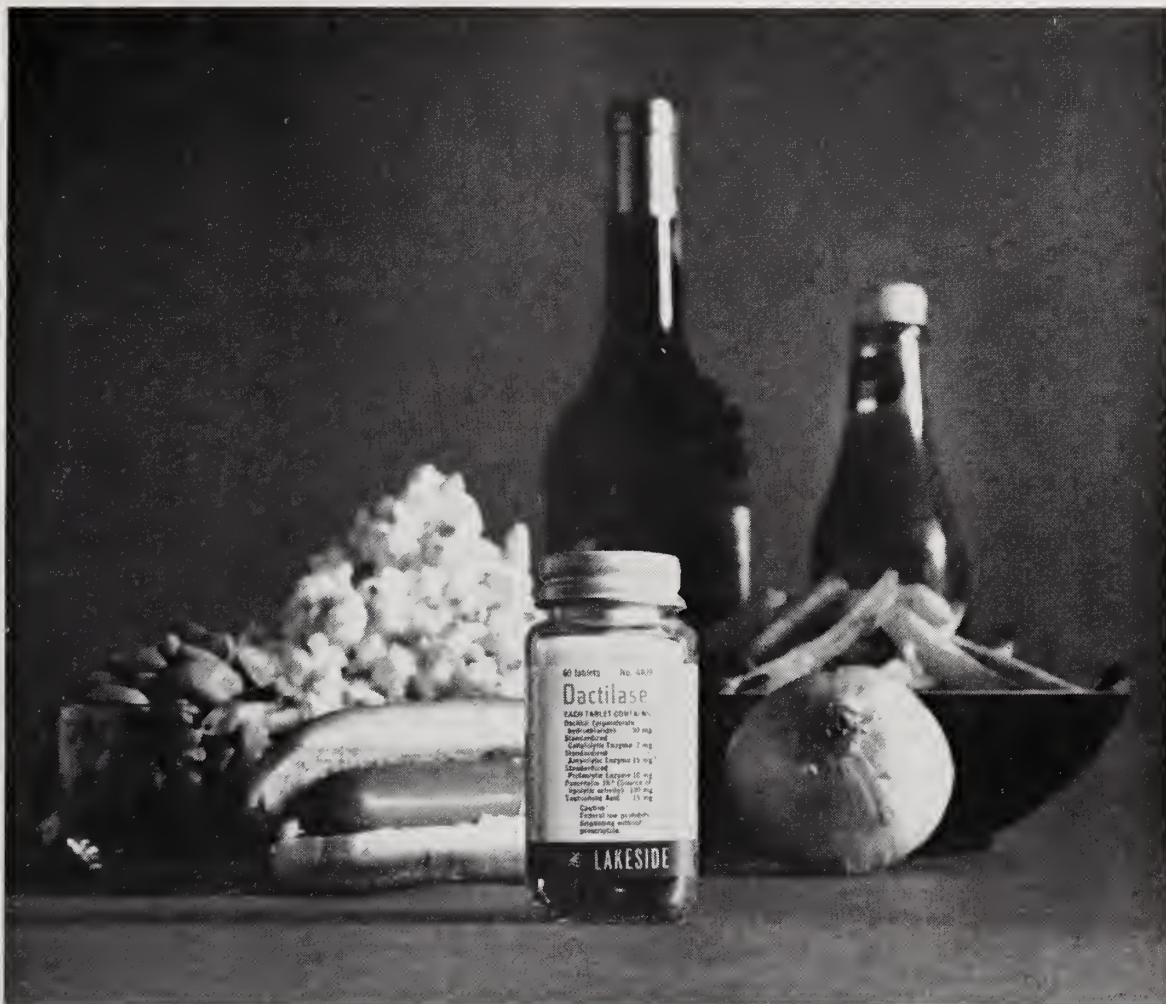
Maurice Arthur Selinger, M.D.
(1893-1965)

DR. MAURICE A. SELINGER, clinical pathologist and internist, died August 26, 1965, at his home at 4000 Massachusetts Avenue, N.W. His offices were at 1150 Connecticut Avenue, N.W., where he was a partner in the firm of Lindsay, Rice & Selinger.

Dr. Selinger, a native Washingtonian, was born, April 14, 1893. He enrolled in Georgetown University School of Medicine, receiving his medical degree in 1915. He interned at Garfield Memorial Hospital for a year and spent another year as resident physician at Mount Sinai Hospital in New York City.

Dr. Selinger served in the Army Medical Corps during both World Wars. In World War I he was a medical officer in the Wildeat Division. During World War II, with the rank of Colonel, he was in charge of the 195th General Hospital outside of Rheims, France.

Dr. Selinger was appointed to the D. C. Medi-



more complete relief for the "dyspeptic"

DACTILASE[®]

Dactilase provides comprehensive therapy for a wide range of digestive disorders. Its antispasmodic and anesthetic actions rapidly relieve pain and spasm. Dactilase decreases hypermotility without inducing stasis. In addition, it supplies digestive enzymes to help reduce bloating, belching and flatulence. Dactilase does not interfere with normal digestive secretions. Very often it can be a most useful answer to the dyspeptic's needs.

DACTILASE: Each tablet contains: Dactil[®] (piperidolate hydrochloride), 50 mg.; Standardized cellulolytic* enzyme, 2 mg.; Standardized amylolytic enzyme, 15 mg.; Standardized proteolytic enzyme, 10 mg.; Pancreatin 3X** (source of lipolytic activity), 100 mg.; Taurocholic acid, 15 mg.

*Need in human nutrition not established. **As acid resistant granules equivalent in activity to 300 mg. Pancreatin N.F.

Side Effects and Contraindications: DACTILASE is almost entirely free of side effects. However, it should be withheld in glaucoma and in jaundice due to complete biliary obstruction.

Administration and Dosage: One tablet with, or immediately following each meal. Tablets should be swallowed whole.

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cal Advisory Board, Selective Service, in 1940 and following his Army service in World War II he became its Chairman. In 1953 he was appointed to the National Advisory Committee, Selective Service System.

He was pathologist at the Episcopal Eye, Ear and Throat Hospital and associate pathologist at the Garfield Memorial Hospital until these institutions merged with the Washington Hospital Center. He was also associate pathologist at Children's Hospital from 1922 to 1960. At the time of his death he was on the senior advisory staff of Children's Hospital and consultant in medicine to the Washington Hospital Center.

Elected to Active membership in the D. C. Medical Society in 1920, he served on many of its committees and as Chairman of the Committee on Veterans Affairs in 1954. He became a Life member in 1960. He was a member of the American Medical Association, a Fellow of the American College of Physicians, and a member of the American Society of Clinical Pathologists, the American Diabetes Association, and the American Association of Blood Banks. He was one of the founders of the Osler Society.

Surviving Dr. Selinger are his wife, Mrs. Mildred Reynolds Selinger, and 2 sons, Maurice A. Selinger, Jr., of New York City, and John R. Selinger, of 3901 Garfield Street, N.W. He also leaves a brother, Dr. Jerome Selinger, New Canaan, Conn.

William Slaughter Hardesty, M.D.

(1871-1965)

DR. WILLIAM S. HARDESTY, of 1921 Kalorama Road, N.W., died at Doctors Hospital on August 26, 1965. He had been in general practice for almost half a century, with offices for many years at 1629 Columbia Road, N.W. He retired about 10 years ago.

Born in Howard County, Maryland, he was the son of a physician, Dr. J. R. L. Hardesty, and Susan Ficklen Hardesty. He attended public schools in the District of Columbia. After receiving his medical degree from George Washington University in 1906, he interned at the University Hospital and served a brief residency at the Episcopal Eye, Ear and Throat Hospital.

Dr. Hardesty was elected to the Medical Society of the District of Columbia in 1914 and became a Life member in 1954. He was a member of the American Medical Association. He also belonged to the Society of the Cincinnati.

He leaves a cousin, Mrs. Francis W. Hill, 5826 Highland Drive, Chevy Chase, Md., and a niece,

Mrs. Elizabeth Hardesty Phillips, of Baltimore, Md. His wife, Mrs. Mary Stuart Hardesty, died several years ago.

Fred Royce Franzoni, Jr., B.S.

(1913-1965)

F. ROYCE FRANZONI, who distinguished himself in the field of pharmacy, died at his home on August 22, 1965. He was owner and President of Z. D. Gilman, Inc., a Washington pharmacy that had been in his family since World War I. He was an Associate member of the D. C. Medical Society.

Mr. Franzoni was the son of Fred Royce Franzoni, Sr. and Bessie Jones Franzoni. He attended the first 4-year course given in pharmacy at the George Washington University, receiving his Bachelor of Science degree in 1936. He also held an honorary degree in pharmaceutical medicine from the Philadelphia College of Pharmacy and Science.

Mr. Franzoni served in the Army Reserve for 32 years, achieving the rank of Colonel. During World War II, from 1941 to 1945, he was stationed at the Pentagon. In 1949 he was one of 5 members selected by the American Pharmaceutical Association to serve on its mission to Japan where he assisted in the formulation of plans and a study that resulted in the separation of medicine and pharmacy in Japan and in the reorganization of the Japanese system of pharmaceutical education. In recognition of these services he was made an honorary member of the Japanese Pharmaceutical Association.

Upon his return to civil life in 1946 he was appointed to the Board of Pharmacy for the District of Columbia and was elected President of the Board in 1953. He was a member and Past President of the District of Columbia Pharmaceutical Association, the National Association of Boards of Pharmacy, and the American Pharmaceutical Association. He was a Fellow of the American College of Apothecaries and a member of the American Society of Hospital Pharmacists, and the Maryland and Virginia Pharmaceutical Associations. He was an associate member of the American Medical Association, a member of the Association of Military Surgeons of the United States (Pharmacy Section), and a member of many other scientific and civic organizations.

He is survived by his wife, Mrs. Evelyn Coakley Franzoni; a son, F. Royce Franzoni III, and 2 daughters, Maryann and Carolyn, all of the home address, 3508 North Abingdon Street, Arlington, Va.

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provide rapid, sustained vasodilation for warmth and relief of pain,
dizziness and faintness in patients with impaired peripheral circulation

GERILIQUID warms cold hands and feet through the thermogenic action of glycine and through sustained vasodilation by glycine and niacin. In addition, in patients with

impaired peripheral circulation, GERILIQUID increases the ability to walk farther with less pain. Patients particularly like the palatable, sherry wine base.

Geriliquid[®]



IN BRIEF: Composition: Each 5 ml. contains: niacin 75 mg. and aminoacetic acid (glycine) 750 mg. in a palatable sherry wine base; alcohol 5%.

Side Effects: Occasional lightheadedness or transient itching which may disappear with continued use. There are no known contraindications; however, caution is advised when there is concomitant administration of a coronary vasodilator.

Administration and Dosage: One or two teaspoonfuls 3 times a day before meals. If flushing is objectionable, dosage may be lowered. However, tolerance to flushing usually develops without loss of efficacy in regard to vasodilation.

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William Green Cushard, M.D.

(1902-1965)

Dr. WILLIAM G. CUSHARD, resident psychiatrist at St. Elizabeths Hospital from 1929 to 1961, died, July 11, 1965, at the Washington Hospital Center.

Dr. Cushard was born, August 20, 1902, in Columbus, Ohio. He graduated in medicine from George Washington University in 1927 and served his residency in psychiatry at St. Elizabeths.

He became Clinical Director of St. Elizabeths and afterward Superintendent of the Clifton T. Perkins State Hospital in Jessup, Md. After 1964 he devoted himself to the private practice of forensic psychiatry.

A specialist in forensic psychiatry, he had been examining psychiatrist for the United States Attorney of the U. S. District Court of the District of Columbia and consultant for the Circuit Judicial Conference for the District. He had also been a lecturer in forensic psychiatry for the Secret Service, the FBI, and the Supreme Court Police. During World War II he was an examining psychiatrist at the Armed Forces Induction Center at Fort Myer. He taught psychiatry at George Washington University from 1945 to 1954.

Dr. Cushard was a member of the American Medical Association, the American Psychiatric Association, the Medical and Chirurgical Faculty of the State of Maryland, and the Montgomery County (Md.) Medical Society. He was an Associate member of the D.C. Medical Society from 1939 to 1946.

He leaves his wife, Mrs. Inez Cushard, of the home address, 9600 Old Spring Road, Kensington, Md.; a son, Dr. William G. Cushard, Jr., also of the home address; and a daughter, Mrs. Carol Patterson, of Annapolis, Md.

Serum Proteins and G.I. Tract—Laster and Waldmann

(Continued from page 462)

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Glenn Dale Hospital—Grant

(Continued from page 483)

patient services are for tuberculosis patients, including those from D.C. General Hospital's pulmonary disease unit and some from Veterans Administration Hospital.

In addition to such followup through the Clinic, there are epidemiologic investigations related to the Department's TB Control Program and field work to reach delinquent patients who need to continue their treatment.

MURRAY GRANT, M.D., D.P.H.
D.C. Director of Public Health

Medicolegal Abstracts—Montgomery

(Continued from page 491)

tions for narcotics by persons who are not licensed physicians. The court, however, held that when he wrote deceased and fictitious names on prescriptions, they then constituted falsely made "doctor's prescriptions" even though he is a physician.

The one dissenting judge felt that he should have been tried under the statute which prohibits making a willfully false statement in a prescription by any person.

ROBERT R. MONTGOMERY, M.D.

WHEN MOTHER'S IRON ISN'T UP TO MOTHERHOOD

IN BRIEF: **ACTIONS AND USES:** A single dose of Imferon (iron dextran injection) will measurably begin to raise hemoglobin and a complete course of therapy will effectively rebuild iron reserves. The drug is indicated only for specifically-diagnosed cases of iron deficiency anemia and then only when oral administration of iron is ineffective or impractical. Such iron deficiency anemia may include: patients in the last trimester of pregnancy; patients with gastrointestinal disease or those recovering from gastrointestinal surgery; patients with chronic bleeding with continual and extensive iron losses not rapidly replenishable with oral iron; patients intolerant of blood transfusion as a source of iron; infants with hypochromic anemia; patients who cannot be relied upon to take oral iron.

COMPOSITION: Imferon (iron dextran injection) is a well-tolerated solution of iron dextran complex providing an equivalent of 50 mg. of elemental iron in each cc. The solution contains 0.9% sodium chloride and has a pH of 5.2-6.0. The 10 cc. vial contains 0.5% phenol as a preservative.

ADMINISTRATION AND DOSAGE: Dosage, based upon body weight and Gm. Hb./100 cc. of blood, ranges from 0.5 cc. in infants to 5.0 cc. in adults, daily, every other day, or weekly. The total iron requirement for the individual patient is readily obtainable from the dosage chart in the package insert. Deep intramuscular injection in the upper outer quadrant of the buttock, using a Z-track technique, (with displacement of the skin laterally prior to injection), insures absorption and will help avoid staining of the skin. A 2-inch needle is recommended for the adult of average size.

SIDE EFFECTS: Local and systemic side effects are few. Staining of the skin may occur. Excessive dosage, beyond the calculated need, may cause hemosiderosis. Although allergic or anaphylactoid reactions are not common, occasional severe reactions have been observed, including three fatal reactions which may have been due to Imferon (iron dextran injection). Urticaria, arthralgia, lymphadenopathy, nausea, headache, and fever have occasionally been reported. Initial test doses of 0.5 cc. are advisable.

PRECAUTIONS: If sensitivity to test doses is manifested, the drug should not be given. Imferon (iron dextran injection) must be administered by deep intramuscular injection only. Inject only in the upper outer quadrant of the buttock, not in the arm or other exposed area.

CONTRAINDICATIONS: Imferon (iron dextran injection) is contraindicated in patients sensitive to iron dextran complex. Since its use is intended for the treatment of iron deficiency anemia only, it is contraindicated in other anemias.

CARCINOGENICITY POTENTIAL: Using relatively massive doses, Imferon (iron dextran injection) has been shown to produce sarcoma in rats, mice and rabbits and possibly in hamsters, but not in guinea pigs. The risk of carcinogenesis, if any in man, following recommended therapy with Imferon (iron dextran injection) appears to be extremely small.

SUPPLIED: 2 cc. ampuls, boxes of 10; 5 cc. ampuls, boxes of 4; 10 cc. multiple dose vials.

in iron deficiency anemia for rapid and predictable replacement of iron reserves

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(iron dextran injection)



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BOOK REVIEWS

Surgery of the Parotid Gland. ROBIN ANDERSON, M.D., F.A.C.S., AND LOUIS T. BYARS, M.D., F.A.C.S. Price, \$12.75. Pp. 177, with 127 illustrations. St. Louis: Mosby, 1965.

This very interesting treatise on the parotid gland enjoys many of the best features of both a monograph and a text. It is compact and concise, yet broad enough in scope and exhaustive enough in detail to rate some merit as a textbook.

The initial chapters dealing with the anatomy and pathology of the parotid are particularly good since these features are seldom dealt with, in sufficient detail, in medical school or in residency training; and few surgeons see enough of this type of pathology in private practice to develop or maintain familiarity with it.

The discussions of diagnostic and preoperative procedure have mixed merits. There is some tendency to assume that all surgeons will have access to the specialized facilities of a large clinic, and thus a tendency to oversimplify some things which are decidedly difficult. On the other hand, the authors' straightforward approach to preoperative preparation erases the notion of any "exclusive magic" with which many large specialty clinic writers attempt to surround themselves.

The sections dealing with primary surgery of the parotid are especially good; they are simple, direct, and descriptive. The line drawings are very clear, although they tend to simplify the anatomy to a deceptive extent. I think that the extensive use of black and white photographs of both gross and microscopic pathology adds to the visual interest and stimulation, but adds little to the teaching aspect. This phase of study should be correlated with a good color atlas of pathology whose images approach the situation to be seen in the operative theatre.

It was particularly gratifying to see the section on radiation therapy decriing the too frequent reliance on X-ray rather than surgery for most parotid disease. Too often in the past there has been a tendency to try radiation where the surgeon or internist felt unsure of himself in the approach to therapy otherwise.

Perhaps the most interesting and controversial section of this book is the one dealing with reconstructive surgery, especially with respect to the facial nerve. The question of preservation or sacrifice of the facial nerve, in both its human and its legal aspects, has generated more heat in discussions of parotid surgery than any other aspect. Drs. Anderson and Byars present the clearest and most common sense solution to this problem which I have yet read. Their approach is both logical and rational as a guide to explaining a frightening problem to patients and to salving the conscience of the operator who has feelings of insecurity in this area. However, there is another side to the coin; in this case there is again the tendency of the expert to oversimplify certain difficult techniques, such as facial nerve graft, and to present glowing results which are more than most qualified surgeons have experienced in

their practices. This type of enthusiasm is not always beneficial to the profession, since it will sometimes tempt the surgeon of borderline training and abilities to attempt a procedure which he is unable to complete with success. The most penetrating and lasting thought from this section, however, is the knowledge that radical parotid surgery need not necessarily lead to permanent and macabre deformities.

In summation, I found this book to be comprehensive, clear, and written in an interesting style; these qualities, when combined with its conciseness and brevity, will make it a worthy addition to the library of any surgeon doing head and neck surgery.

JOHN V. CLIFT, M.D.

The Popes, the Pill and the People. A Documentary Study. JOHN R. CAVANAGH, M.D., F.A.C.P., F.A.P.A., K.S.G. Price, \$3.75. Pp. 128. Milwaukee: Bruce, 1965.

This timely book on "the Pill" contains a most interesting discussion of this controversial subject both medically and theologically. The author is a Roman Catholic physician and psychiatrist associated with Catholic University and Georgetown University School of Medicine. It is of note that he is a lecturer in Sacred Theology in the Department of Psychology and Psychiatry at Catholic University. The largest portion of the book deals with that segment of Roman Catholic dogma pertinent to the use of drugs which may have a sterilizing effect upon women.

In addition to the theological discussion, there is a handy and concise list of the contraceptive pills now on the market, including their chemical formulae. Despite the fact that the author is a psychiatrist rather than a gynecologist, the chapters dealing with the endocrinology of the female are remarkably lucid. The therapeutic uses of "the Pill" have not been neglected, one whole chapter dealing with this. The side-effects of the drugs are also discussed along with a brief mention of reported hazards associated with taking "the Pill."

This book is well documented with references and is most readable. It is quite apparent that the author tends toward the more conservative viewpoint in interpreting statements made by the late Pope Pius XII as well as other members of the Church's hierarchy.

As a handy reference for the chemistry of the contraceptive pills and the endocrinology of the female, this book is a valuable adjunct to any library.

CAROLINE JACKSON, M.D.

Tracy's The Doctor as a Witness, 2nd ed. WILLIAM J. CURRAN, LL.M., S.M. Hyg. Price, \$5.75. Pp. 196. Philadelphia: Saunders, 1965.

This book is an easy-to-read essay which may appeal to certain young doctors whose courses at medical school did not include "medical jurisprudence." I was unable to find any statement of fact which was not

(Continued on page 32)



approximating the diuretic efficacy of meralluride

METAHYDRIN[®] (trichlormethiazide)

To determine the relative efficacy of thiazide diuretics in congestive heart failure, Metahydrin (trichlormethiazide) and three other thiazides were measured against Mercuhydrin[®] (meralluride injection)—the standard diuretic. "The results leave little doubt that the diuretic efficacy, that is, the 'ceiling effect' in these terms, is not the same for different thiazides."* The assays ranged from about 40% of the effectiveness of Mercuhydrin through 67%, 77% to 90% for Metahydrin. The latter two values were thought to be significantly different from the lowest value and to be therapeutically important.

*Gold, H., *et al*: Closed Panel Conference: Present Status of the Management of Congestive Failure and Advances in Diuretic Therapy, *Journal of New Drugs*, 1:177, July-August, 1961.

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IN BRIEF: ADMINISTRATION AND DOSAGE: One 2 mg. or 4 mg. tablet once or twice daily. In acute, severe decompensation, Mercuhydrin[®] (meralluride injection) may be necessary initially.

PRECAUTIONS: As with all effective diuretics, vigorous therapy may produce electrolyte depletion. Patients with severely reduced renal function should be observed carefully since thiazides may be contraindicated. Care should be taken with patients predisposed to diabetes or gout. Patients with a tendency to potassium deficiency, as in hepatic cirrhosis or diarrheal syndromes, or those under therapy with digitalis, ACTH, or certain adrenal steroids, also should be watched carefully.

SIDE EFFECTS: Nausea, flushing, constipation, skin rash, muscle cramps and gastric discomfort have been occasionally noted; rarely thrombocytopenia and bone marrow depression, photosensitivity, cholestatic jaundice, pancreatitis, perimacular edema, gout and diabetes have been caused by administration of thiazides.

CONTRAINDICATIONS: Complete renal shutdown; rising azotemia or development of hyperkalemia or acidosis in severe renal disease; demonstrated hypersensitivity.

HOW SUPPLIED: Bottles of 100 and 1000 tablets.

Book Reviews

(Continued from page 30)

enunciated in medical classes 60 years ago. I do not understand why the repetition of old bromides deserves 2 editions. The information in the book is familiar to all well informed doctors of medicine.

The book might have explained why the doctor is forced to take an oath to tell the truth, the whole truth, and nothing but the truth when he is allowed to tell only those parts of the truth the lawyers want to hear, the meaning of which is different out of context; why at the whim of the judge the medical witness is robbed of his only salable assets (his knowledge and judgment) by being forced under penalty to give them away with only an ordinary witness fee; or why a lawyer is able to waste the time of the medical witness and keep him waiting for hours to deliver 10 minutes of testimony. (Of course, the witness may appeal to the judge whose decision to hear him pronto depends upon how the judge's breakfast agreed with him.) These would be useful and interesting questions to discuss.

The book in its present form adds little light to the medical witness situation and I cannot recommend it.

JAMES A. GANNON, Sr., M.D.

Fundamentals of Orthopaedics. JOHN J. GARTLAND, A.B., M.D. Price, \$8.00. Pp. 338, with 158 illustrations. Philadelphia: Saunders, 1965.

Dr. Gartland's new work in Orthopaedic Surgery must be considered a handbook and not a definitive textbook of Orthopaedic Surgery. Its format is handy. The style is concise and easily readable. His concepts and information are basically sound and modern in all respects. The book discusses adequately the more common orthopedic diseases seen in practice and includes some of the more common fractures as well. The emphasis appears to be on diagnosis and recognition of the various disorders rather than on treatment.

The author has included an interesting last chapter on Orthopaedic Horizons, which outlines possible routes which progress in orthopedic surgery may take in the future. There is a valuable bibliography at the end of each chapter which lists the more recent orthopedic literature and the "classics" in the field. The glossary at the end of the book is well constructed and accurate in all respects. There is a rather unique chapter on low back pain which is well done and outlines the steps necessary for an adequate lower back evaluation. The price of the text appears reasonable and the line drawings are excellent.

The book, however, does have certain shortcomings. The field in which it enters is a very competitive one with several excellent texts aimed at the same portion of the reading population. Although the reviewer agrees with the majority of the author's concepts, there are several points of disagreement. The words "compound" and "simple" when used with reference to fractures are no longer considered proper terms. The terms "open" and "closed" fractures should be used exclu-

sively. The author also didactically states that open fractures should be converted to closed fractures surgically; however, there are certain circumstances, especially in battlefield or mass casualty situations, where open fractures should be left open, at least temporarily.

The illustrative X-ray material is poorly reproduced and the X-rays are not always typical of the disease under discussion; for instance, in the section on chondrogenic tumors the materials selected for enchondromata and chondrosarcoma are not typical of these diseases nor were they reproduced satisfactorily. Several of the more common diseases are not illustrated with X-rays, such as Osgood-Schlatter's disease and Sever's and Blount's diseases. The author also uses commercial names in describing drugs, such as Benemid,[®] without generic qualification.

All in all, I consider this a satisfactory text for students, house officers, and generalists; however, it lacks the polish that we have come to expect in our modern textbooks.

GEORGE J. SCHONHOLTZ, M.D.

Trauma to the Liver. Volume III in the Series, Major Problems in Clinical Surgery. GORDON F. MADDING, M.D., M.S. (Surgery), F.A.C.S., AND PAUL A. KENNEDY, M.D., F.A.C.S.; ENGLEBERT J. DUNPHY, M.D., Consulting Editor. Price, \$6.00. Pp. 134, illustrated. Philadelphia: Saunders, 1965.

For the past several years there has been a growing mass of experience and, concomitantly, reports in the literature on the management of injuries of the liver. Now, in this volume, Drs. Madding and Kennedy have compiled from that literature, and from a wealth of personal experience, the current best judgment in the management of this formidable injury. This is a concise, well-organized handbook with excellent linear drawings and tables.

The authors' experience has been primarily with penetrating wounds of the liver, gathered from experience in World War II and civilian practice. Local experience has been with blunt injuries, incurred in contact sports and automobile accidents, and massive resections of the right lobe of the liver have been uncommon, but not rare, in this area. It behooves all general surgeons to be up-to-date on the best methods of diagnosis, operative management, surgical anatomy, supportive measures, and expected postoperative metabolic changes. This volume clarifies, by speaking with authority, on the value of some controversial aspects of this condition, such as the 4-quadrant abdominal paracentesis, hypothermia, employment of gauze packs, period of drainage, and when to operate.

I believe this book deserves at least a 1-time reading by all general surgeons. It can also be useful as a quick and ready reference when one encounters a case of severe liver injury.

THOMAS M. WRIGHT, M.D.

(Continued on page 34)

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Hypertension has been called the price of success...and in some life-situations, the cost of failure. In either event, Metatensin lowers blood pressure, cushions the patient against stress and retards the progress of disease. Metatensin is effective and economical. It is well-tolerated over long periods.

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Book Reviews

(Continued from page 32)

Rheumatic Fever—Diagnosis, Management and Prevention. MILTON MARKOWITZ, A.B., M.D., AND ANN GAYLER KUTTNER, B.S., PH.D., M.D. With a special chapter on Community Health Services by Leon Gordis, A.B., M.D. Volume II in the series, *Major Problems in Clinical Pediatrics*; ALEXANDER J. SCHAEFFER, Consulting Editor. Price, \$7.50. Pp. 242, with 35 figures. Philadelphia: Saunders, 1965.

At last the medical profession has an up-to-date, complete and beautifully documented summary of present-day thought in regard to the etiology, pathogenesis, clinical manifestation and treatment of rheumatic fever and rheumatic heart disease. The authors have drawn heavily on their own experience plus the experience of such large clinics as the House of Good Samaritan, Irvington House, etc. Twenty pages of references, some as recent as 1965, indicate the timeliness of the review.

In their presentation of the etiology and pathogenesis they put to rest the question of the relationship of beta-hemolytic streptococcal infection to the rheumatic process. However, they point out that our knowledge of how the *Streptococcus* produces the disease is no clearer today than it was 20 years ago. Likewise the presence or absence of activity of the rheumatic process is still impossible to determine if one accepts the presence of Aschoff bodies as indication of activity.

The section devoted to the clinical manifestations of rheumatic fever is excellent, with a practical suggestion for the recognition of carditis.

The chapter on laboratory findings and subsequent discussions project the importance of demonstrating the presence of evidence of streptococcal infection in making the diagnosis of active rheumatic fever. They point out that only 75 to 85 per cent of patients with rheumatic fever will have an elevated ASO titer; however, if other antibody responses to streptococci are measured, DPNase, DNase, etc., evidence for preceding infection with streptococci can be obtained in 95 per cent of the patients.

The chapter on the treatment of rheumatic fever deals fairly with steroid versus salicylate problem. The authors in a previous study indicated that patients treated early in the course of their illness with large doses of steroids had a lower incidence of residual heart disease. They now come to the following conclusion based on new knowledge: "In the opinion of most observers there has been no clear and consistent demonstration that cardiac damage is prevented or minimized by either salicylates or steroids even if used early in the course of the illness, in high or low dosages, or for long or short periods of time." To this the reviewer adds Amen.

The discussion of prevention of initial attacks and recurrences of rheumatic fever by the prevention of streptococcal infection again needs reemphasis. The authors have clearly shown that benzathine penicillin is much more effective in the prevention of streptococcal

infections and the elimination of streptococci from the throat.

The discussion of chronic rheumatic heart disease is weak. Lacking from the discussion is any reference to the natural history in patients with the various valvular lesions encountered in chronic rheumatic heart disease. This reflects the fact that the authors, being pediatricians, have little opportunity of following the disease into adult life.

Finally, there is a large appendix which summarizes the rheumatic fever diagnostic criteria plus the precautionary recommendations from the committees on prevention of rheumatic fever and endocarditis of the Council on Rheumatic Fever and Congenital Heart Disease of the American Heart Association.

This book is the most definitive treatise on rheumatic fever available to date. The authors deserve high praise for the excellence of their work.

LEWIS P. SCOTT III, M.D.

The Complex World of Modern Public Health. The Third Bronfman Lecture. LUTHER L. TERRY, M.D. Pp. 36. New York: American Public Health Association, 1964.

This handsome monograph has been published in a limited edition for the American Public Health Association. The high quality of the paper and the unusual type make this slender volume a pleasure to handle and read.

This paper was presented by Dr. Terry on the occasion of the third distribution of prizes for Public Health Achievement awarded annually by the Samuel Bronfman Foundation, Inc. The recipients in 1963 were: Harold D. Chope, M.D. (representing Public Health at the Local level), Herman E. Hilleboe, M.D. (representing Public Health at the State level), and Marion B. Folsom (representing Public Health at the Federal level). Brief biographies of these distinguished public figures are provided.

Dr. Terry spoke in a philosophical vein describing the diverse problems of the present day which face workers in the field of Public Health. He mentioned the need for redefinition of boundaries both in territory of administration and in the many areas of fundamental relationships between patient, physician, and health facility.

He considered briefly the community of the future and the increasing need for creative leadership, mentioning the 3 prize-winners as examples of outstanding leaders in the 3 levels of Government.

In conclusion, Dr. Terry offered a new and effective "basic-six" guidelines for a more realistic approach to today's complexities as encountered in Public Health. Certainly the ingredients of this policy are straightforward and direct and should be acceptable to most readers.

This book, although an elegant production, will have a limited appeal except to those who have time for library browsing.

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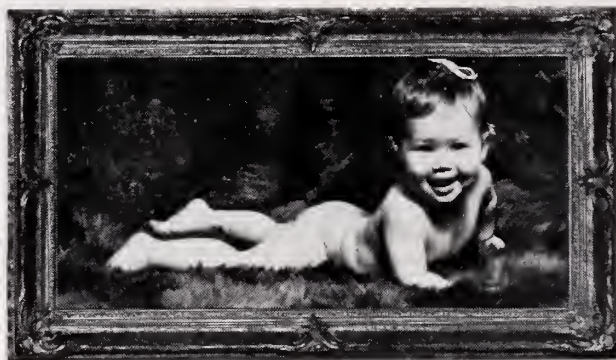
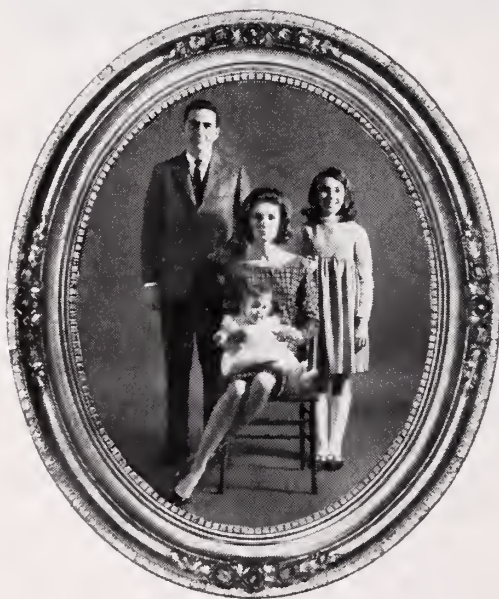
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1—Pomeranze, J., and Gadek, R.J.: Am. Pract. & Digest Treat. 8:73-77 (Jan.) 1957

2—Asher, L.M.: Am. J. Digestive Diseases 4:272 (Apr.) 1959



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Retain Your Health Insurance Policies: Social Security Commissioner Robert M. Ball emphasized that persons over 65 should not cancel any hospital or medical insurance they now have because of the new law. He said: "None of the health insurance provisions of the new law gives any protection whatsoever until July 1, 1966."—News releases, U.S. Department of Health, Education, and Welfare.



The Moon and Suicide: The myth that lovers are moonstruck may have some validity, but you can discount tales that the moon's baleful glare has prompted human suicide or murder. Dr. Alex D. Pokorny, Chief of Psychiatry at the Veterans Administration Hospital in Houston, Texas, obtained a list of all suicides and homicides for the State of Texas for the years 1959, 1960 and 1961, a total of 2,497 suicides and 2,017 homicides. The results showed: Full Moon, 1,246 suicides and 1,005 homicides; New Moon, 1,251 suicides and 1,012 homicides.

Dr. Pokorny's firm conclusion was that neither weather nor the moon can explain man's violence to man.—News release, June 10, 1965, from Veterans Administration.



Of 604 drugs developed worldwide 1941-64, the U. S. originated 366 of them; 167 were developed in 16 foreign countries; the sources for 44 are not identified; 16 are new uses of previously known compounds; and 11 are credited to more than 1 country.—PMA News Release, May 1965.



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Medical Department, United States Army: Surgery in World War II. Thoracic Surgery, Volume II. COLONEL ARNOLD LORENTZ AHNFELDT, MC, USA, Editor-in-Chief; FRANK B. BERRY, M.D., Editor for Thoracic Surgery; AND ELIZABETH M. McFETRIDGE, M.A., Associate Editor. Prepared and published under the direction of LT. GENERAL LEONARD D. HEATON, The Surgeon General, United States Army. Price, \$7.25. Pp. 615, with 222 illustrations, 3 color plates, 24 tables. Washington, D.C.: Superintendent of Documents, U.S. Government Printing Office, 1965.

Physical Examination of the Joints. WILLIAM P. BEETHAM, JR., M.D., A.A.C.P., HOWARD F. POLLEY, M.D., M.S., F.A.C.P., CHARLES H. SLOCUMB, M.D., M.S., WALT F. WEAVER, M.D., M.S., A.A.C.P., with 15 anatomic drawings by Russell L. Drake. Price, \$7.50. Pp. 198. Philadelphia: Saunders, 1965.

Surgery in America: From the Colonial Era to the Twentieth Century. Selected Writings. Edited by A. SCOTT EARLE, M.D. Price, \$8.50. Pp. 280, with 44 illustrations. Philadelphia: Saunders, 1965.

Hallux Valgus, Allied Deformities of the Forefoot and Metatarsalgia. H. KELIKIAN, M.D. Price, \$19.50. Pp. 503, illustrated. Philadelphia: Saunders, 1965.

The Management of Fractures and Soft Tissue Injuries, 2nd ed. By the Committee on Trauma, American College of Surgeons. Price, \$7.50. Pp. 365, illustrated. Philadelphia: Saunders, 1965.

Electrocardiography and Vectorecardiography—Instrumentation, Fundamentals, and Clinical Applications. LAWRENCE E. LAMB, M.D. Price, \$17.00. Pp. 609, with 603 illustrations. Philadelphia: Saunders, 1965.

From Auscultation to Phonocardiography. ALDO A. LUISADA, M.D., with the collaboration of D. M. MACCANON, Ph.D., L. M. ROSA, M.D., P. M. SHAH, M.D., AND R. ZALTER, M.D. Price, \$17.75. Pp. 351, with 196 illustrations. St. Louis: Mosby, 1965.

Physiologic Foundations for Marriage Counseling. JOSEPH B. TRAINER, M.D. Price, \$8.00. Pp. 287. St. Louis: Mosby, 1965.

Applied Hypnosis and Positive Suggestion in Medicine, Dentistry, and Patient Care. GEORGE A. ULETT, B.A., M.S., M.D., Ph.D., AND DONALD B. PETERSON, M.D. Price, \$8.50. Pp. 134. St. Louis: Mosby, 1965.

Textbook of Obstetrics. JOHN C. ULLERY, M.D., ZEPH J. R. HOLLENBECK, M.D., and 31 contributors. Foreword by Richard L. Meiling, M.D. Price, \$17.50. Pp. 752, with 292 figures and 3 color plates. St. Louis: Mosby, 1965.

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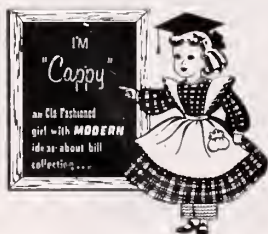
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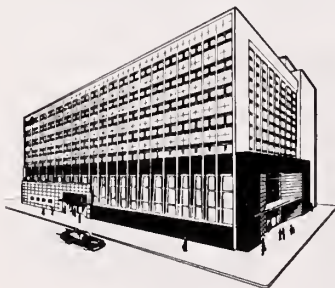


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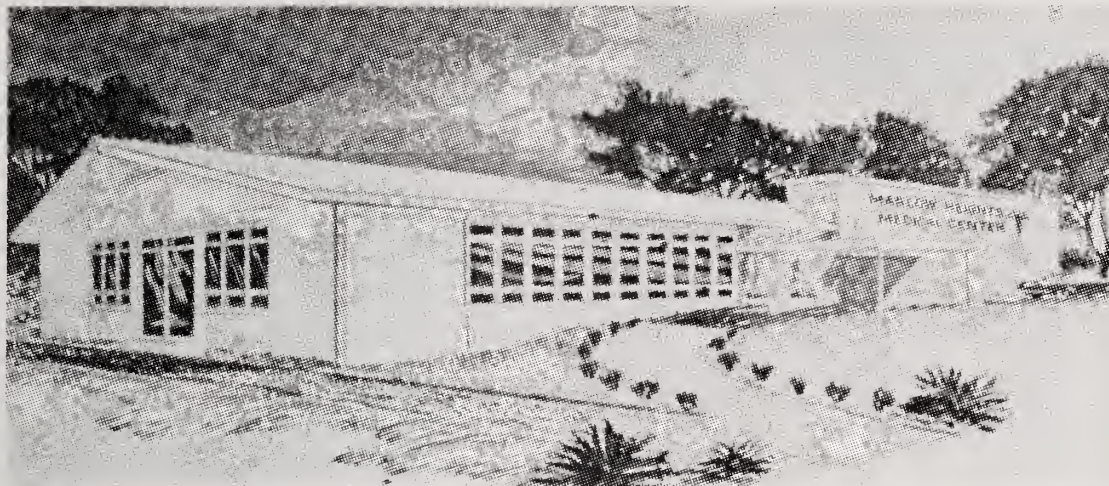
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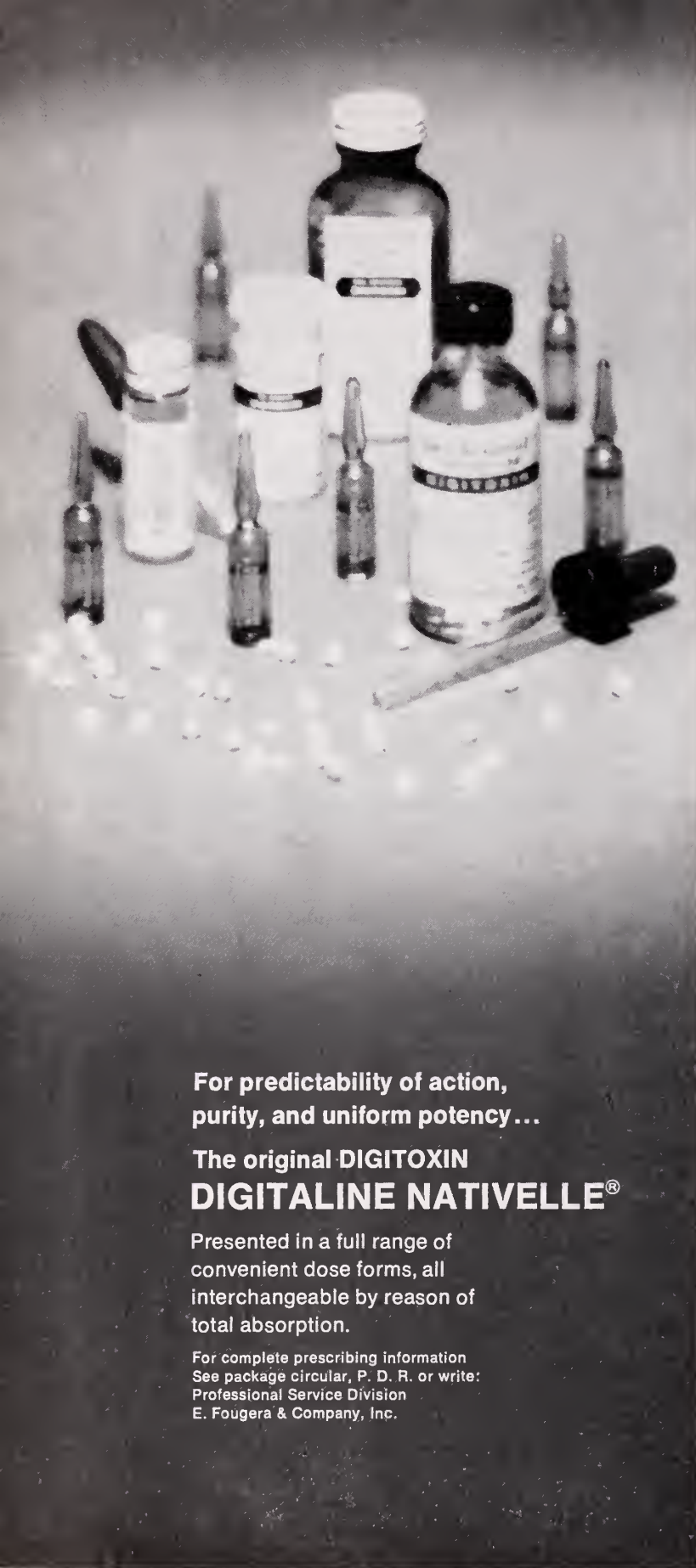
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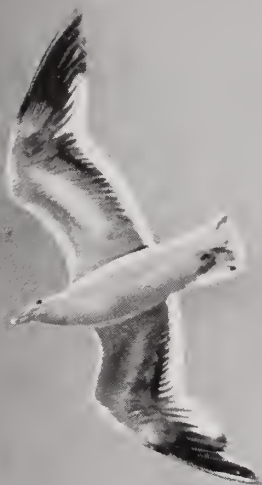
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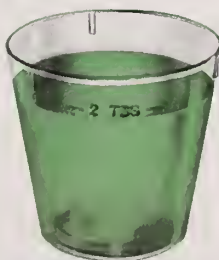
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*Dorhout Mees, E.J., and Geyskes, G.G.: Acta med. scandinav. 175:703, 1964.

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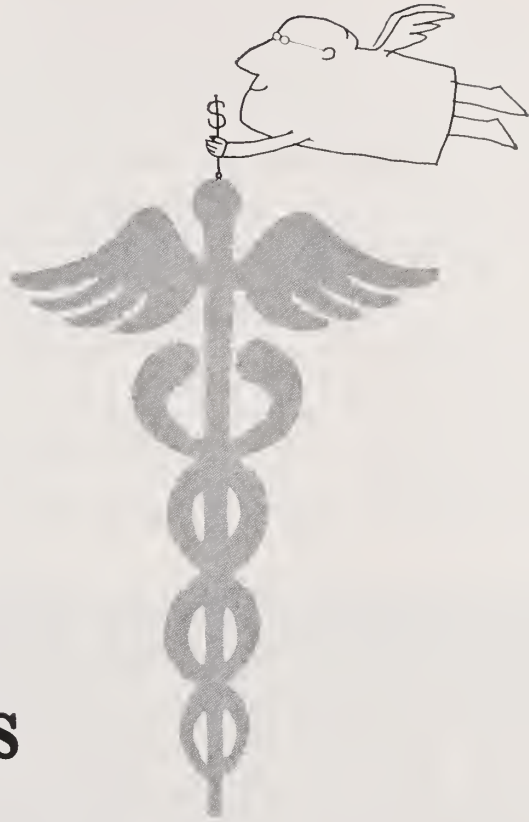
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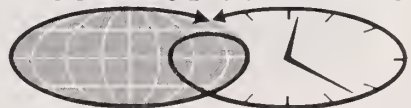
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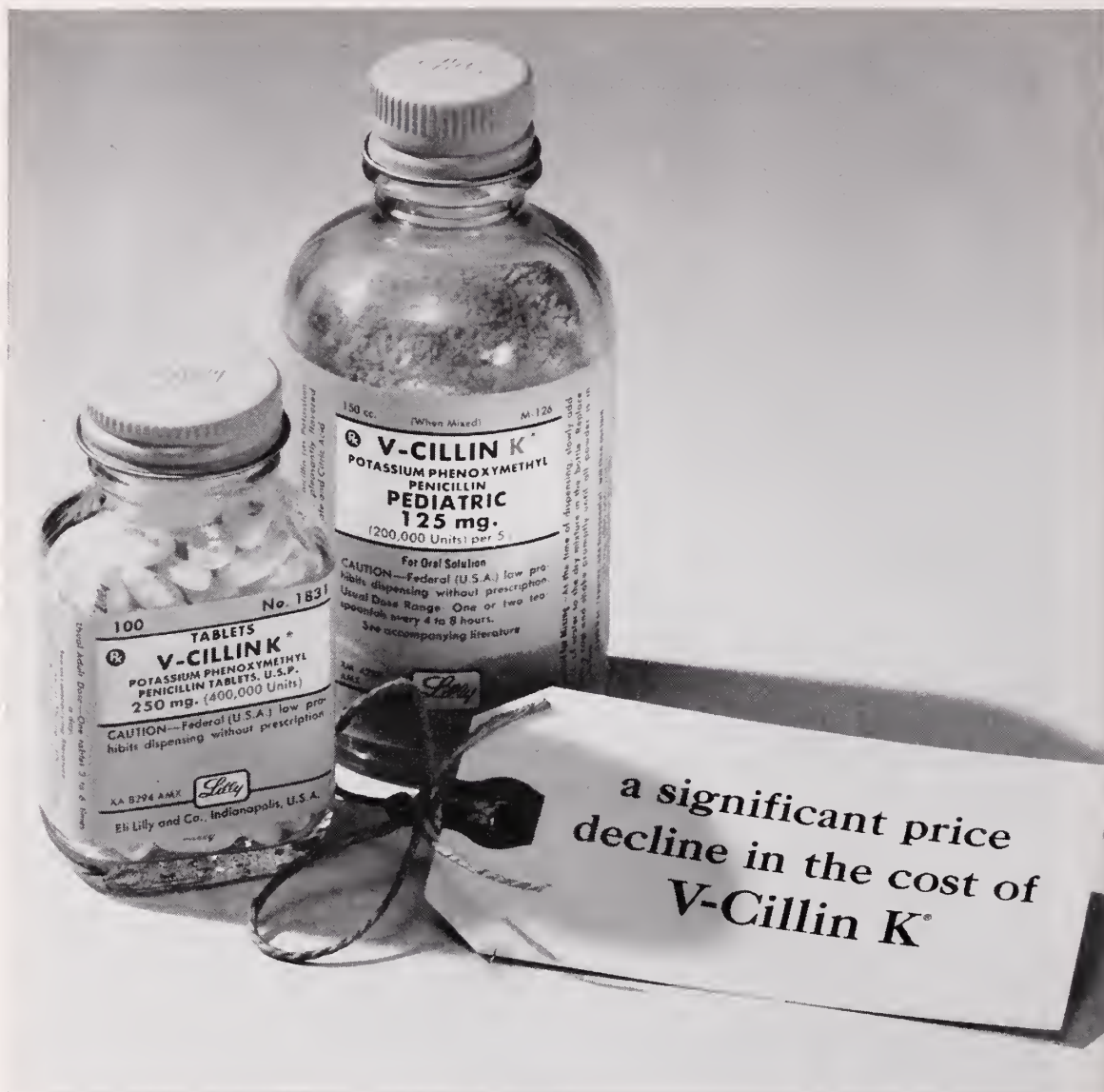
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WITH THE DEATH OF DR. WINFRED OVERHOLSER, October 6, 1964, the medical profession and the Editorial Board of the MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA lost one of its most distinguished members. Your Editor thought it appropriate, therefore, that an issue of the ANNALS be published in his memory. Dr. Zigmond M. Lebonsohn, who succeeded Dr. Overholser on the Board, was asked to furnish an article and to secure other papers which he thought suitable for such an issue. His efforts are hereby gratefully acknowledged.

There will be no review of Dr. Overholser's many contributions because they were so ably described by Dr. Walter E. Barton in the December 1964 issue of the ANNALS.

Neurology and Psychiatry: Separable or Inseparable?*

ZIGMOND M. LEBENSOHN, M.D.

*Clinical Professor of Psychiatry, Georgetown University School of Medicine;
Chief, Department of Psychiatry, Sibley Memorial Hospital, Washington*

THE RELATIONSHIP between neurology and psychiatry has fluctuated widely over the years, ranging from cordial collaboration to overt hostility. At some periods and in some places the relationship has been quite close, and this closeness has been manifested occasionally by the use of the combination term "neuropsychiatry." † In many other centers, especially in the United States, there has been a tendency to look on neurology and psychiatry as entirely separate specialties with little or nothing in common. In such teaching centers there is great danger that the neurologist will emerge with little

knowledge or respect for psychiatry and that the psychiatrist will emerge with little knowledge or respect for neurology.

It shall be the purpose of this paper to trace briefly the pendular fluctuations in the status and interrelations of these specialties during the course of the years, to assess their present-day posture, to point out by an illustrative case the dangers of "exclusivism" in the training of neurologists and psychiatrists, and to make a plea for greater collaboration between these great disciplines.

Historical Considerations

In ancient times all diseases, physical as well as mental, were attributed to the intervention of supernatural forces. In the Greco-Roman period illnesses were thought to be caused by some disturbance in the distribution or quality of the various "humors," a belief that lasted through the 17th and 18th centuries in certain parts of Europe. Attempts were made to explain both

*From a paper written for presentation at the Twenty-fifth Professional Anniversary of Dr. Manuel Velasco-Suarez in Mexico City, 1964; included in "Homenaje XXV Aniversario Profesional," privately printed.

†The late Dr. Robert Wartenberg often expressed great dissatisfaction with this term. He explained his objections on the following grounds: "Neuroanatomy means neurological anatomy; neurophysiology means neurological physiology. Does neuropsychiatry mean neurological psychiatry? I think not."

neurological and psychiatric disorders by the same cluster of mystical and unscientific theories.

With the advent of scientific neurology in the 19th century the situation changed radically, and neurology became one of the elite specialties which attracted some of the finest minds in Europe and America. Despite techniques which must be considered crude by present-day standards, such pioneers as Charcot, Esmarch, Weber, Oppenheim, Brown-Sequard, Hughlings Jackson and many others were able to demonstrate brilliant correlations between the neurological lesion and the neurological symptom. The race to find a physical basis for all human ills was on. The course, to be sure, was studded with dramatic triumphs. General paresis, hyperthyroidism, amyotrophic lateral sclerosis, and Addison's disease are only a few examples of diseases which had once been unceremoniously dumped into the diagnostic wastebasket of the "neuroses," only to be later identified as true disease entities with specific pathogenesis.

In the last half of the 19th century, while neurology was experiencing its golden age of discovery and triumph, psychiatry was languishing in the large overcrowded state hospitals. It is true that many mental hospitals developed neuropathologic laboratories of distinction, but, aside from general paresis, cerebral arteriosclerosis and the brain atrophies, most anatomic and pathologic studies failed to teach the psychiatrist anything useful about the illnesses from which the majority of his patients suffered.

Contributions of Neurologists to Psychiatry

It is one of the great paradoxes in the history of psychiatry that 19th century neurology, which had done so much to "neurologize" psychiatry, should at the same time produce some of the great pioneers in psychiatric research and theory. Certain socioeconomic factors were probably responsible for this remarkable development. Let me explain. Although the great masters of neurology made their fame by studying and describing the chronic and often incurable neurological diseases which came to their attention in the clinic, they often earned their livelihood by treating the hordes of patients suffering from "nerves" who crowded into their consulting rooms.

At the turn of the last century psychiatrists (or alienists as they were then called) cared for the "insane" and rarely, if ever, came out of their "insane asylums" except to testify in court. Any patient suffering from "nerves" would balk at

consulting a psychiatrist, but he could often be persuaded to consult the more respectable "nerve doctor" or neurologist. The patients who consulted the 19th century neurologist complaining of "nerves" might, in fact, be suffering from the whole gamut of psychiatric disorders, from anxiety neurosis and hysteria to full-blown schizophrenia. Hence the neurologist was forced to develop theories and techniques to treat this group of psychiatric patients.

It soon became apparent that even an exhaustive knowledge of all the ascending and descending tracts of the central nervous system, their synapses, staining properties, etc. did not qualify a neurologist for treating a patient with an obsessive-compulsive neurosis or some other complex emotional disorder. In spite of this (or possibly because of this?) there were many neurologists who did make a significant contribution to psychiatric theory and research.

Charcot, Weir Mitchell, and Freud are three who come immediately to mind. Charcot, a brilliant neurologist and neuropathologist, developed a neuroanatomic theory of hysteria which later was disproved by his own pupil, Babinski. Nonetheless, he drew the attention of the medical world to the problem of hysteria which then became a legitimate subject for scientific research. Weir Mitchell, one of America's outstanding clinical neurologists who first described causalgia in gunshot wounds, became even more famous for his "rest cure" for neurosis, a treatment method which was successful chiefly in his own hands. The theoretical basis for this treatment is no longer valid in light of modern knowledge, yet he too made research in the field of emotional disorders a respectable pursuit.

The Impact of Psychoanalysis

It is significant that Freud, the father of psychoanalysis and the most celebrated medical figure of the 20th century, began his medical career as a neuropathologist. A student of Meynert, he was at first a confirmed somaticist. It was only after his association with Charcot in 1885 and later with Bernheim in 1889 that he began to shift to a purely psychologic orientation. Freud's impact on medicine as well as on psychiatry cannot be overestimated. His theories were highly appealing to the intellectual leaders of neurology, psychiatry and other fields who flocked to Vienna and Berlin to learn the new method at first hand. Many of them had become dissatisfied with the purely structural or neurophysio-

logic orientation and they had found the traditional neurological approach to psychiatry sterile and unrewarding. Psychoanalysis offered them a fresh approach, full of promise. After a slow and uncertain start the psychoanalytic movement began to gain momentum until at the present time it has become the dominant influence in psychiatric training, especially in the United States.

During the first half of the 20th century, while psychoanalysis was becoming firmly established as a subspecialty, neurological surgery was developing new and refined techniques with astonishing rapidity. The neurological surgeon became a well-trained neurologist and saw a wider variety of cases. Thus, the medical neurologist, in spite of striking advances in diagnostic and therapeutic techniques, found his work being invaded from two directions. Most patients with functional disorders now go directly and often unhesitatingly to the psychiatrist, whose office is now located in the city instead of the remote "insane asylum." Many patients suspected of having an organic disorder of the central or peripheral nervous system are now referred directly to the neurological surgeon, and consequently the medical neurologist is often bypassed.

The Conflict between Neurology and Psychiatry

As a result of these forces operating during the past 25 to 30 years the antagonisms between neurology and psychiatry became more and more heated. It is regrettable but true that both neurologists and psychiatrists have been guilty of provoking disdainful attitudes toward each other which have blinded scientific objectivity and have delayed scientific progress on both sides.

The orthodox neurologist has often looked upon the psychiatric approach with unconcealed contempt. One eminent British neurologist suggested that a proverb be engraved in large stone letters above the portals of every psychiatric institution reading as follows: "You can't make a silk purse out of a sow's ear!" Another equally eminent neurologist revealed his disdainful attitude toward psychiatry during a case presentation. His neurological resident had demonstrated clear-cut evidence of a hysterical, sensory overlay in a case of multiple sclerosis. The professor reluctantly accepted the resident's findings and added, "You see, gentle-

men, hysteria may sometimes contaminate even the most respectable neurological disease."

The psychiatrists, on the other hand, did not do any better. They "tolerated" neurology as part of their training and forgot what they learned as soon as they had passed their specialty boards or sooner. Many looked upon their neurological training as superfluous, tedious, and, in some instances, even damaging to the proper understanding of "psychodynamics." Some well-known psychiatric leaders openly condemned the medical school as being inimical to the proper training of a psychiatrist. As a result of these attitudes training in neurology for psychiatric residents has been greatly de-emphasized, and the products of such training programs are often incapable of recognizing a neurological disorder which might be encountered in the course of their practice.

A case which illustrates the critical need for good neurological training and orientation on the part of the clinical psychiatrist came to my attention shortly after the end of World War II. The numerous lessons to be learned from this case are just as applicable today as they were 17 years ago.

Mr. M.A., a 39-year-old Government administrator who had previously been in good health, consulted a rhinologist because of "sinus trouble" in January 1947. The diagnosis of hypertrophic rhinitis and sinusitis was made, and the nasal turbinates were cauterized without significant relief. A few days later he left on a field trip to Louisiana where he consulted another doctor who prescribed Privine® nose drops. Six days later he suffered a severe nasal hemorrhage, lost a great deal of blood, and required both anterior and posterior nasal packs to stop the bleeding. He was hospitalized for 3 days. The day following discharge from the hospital he suddenly felt dizzy and faint and experienced a sudden tendency to list to the right. This was followed by diplopia, vertigo, nausea, vomiting, and an uncontrollable tendency to move to the right. He was readmitted to the hospital with the diagnosis of labyrinthitis. Nystagmus, which was present on admission, disappeared almost completely in 24 hours. Vomiting ceased. Weakness, vertigo and numbness on the entire left side of the body persisted. Labyrinth function was tested and found to be normal. Neurological examination was reported as being "negative." Ophthalmologic examination was also negative. The physician concluded: "After a careful evaluation of the case it was agreed that the residual symptoms were entirely functional on the basis of conversion."

The patient had, indeed, reported numerous worries regarding finances and job dissatisfaction. He described himself as an "emotional and nervous type"

He disliked the traveling which his job required. Six months prior to his illness his wife had delivered a stillborn baby, and this was a deeply felt disappointment to both the patient and his wife.

On the patient's return to Washington in February 1947 he consulted his family physician, a highly competent internist. The report which accompanied the patient advised a medical work-up and a psychiatric examination. The chief complaints which persisted at that time were a tendency to fall to the right, staggering while walking, and paresthesias on the left side of the body. The patient admitted that he had had emotional problems with periods of depression and anxiety and some feelings of insecurity. His internist tried to explore this further by means of a Pentothal® Sodium interview, but this was not very productive. Physical examination was essentially normal. The blood pressure was 140/80. Laboratory examinations were negative with the exception of the hemogram which revealed a secondary anemia. The red blood cells numbered 3,110,000 with a hemoglobin of 77 per cent. The patient was receiving iron therapy by mouth.

Although the patient was primarily referred for psychiatric consultation, the neurological aspects of the case became so apparent during the first few minutes of history-taking that, in spite of a previous "negative" neurological report, a careful neurological examination was repeated. This revealed a well-developed, amply nourished white man who walked with a broad base and a staggering, almost drunken gait, with a definite list to the right. Salient neurological findings consisted of a right Horner's syndrome, with the right pupil slightly smaller than the left. The right eye was definitely enophthalmic; both pupils reacted well to light and in accommodation; consensual reflexes were preserved bilaterally. Visual acuity was good in both eyes. The fundi were easily visualized, and the optic discs were flat. The fundi showed good color and normal distribution of the retinal vessels. The right corneal reflex was greatly diminished. The patient was unable to feel pain when the right cornea was stroked with a wisp of cotton; on the left side it was decidedly uncomfortable. Tone in the right arm was diminished although there was no great awkwardness. There was definite loss of pain and temperature sense on the entire left side of the body although vibratory sense and position sense were well preserved. When a cold test tube was placed on the left side it produced a decidedly unpleasant sensation resembling "pins and needles." There was a coarse tremor of the left hand increased by intention. There was no disturbance of handwriting. No nystagmus was present nor was there any speech defect.

Comments

The diagnosis of thrombosis of a small branch of the posterior inferior cerebellar artery was made. The cause for the thrombosis was not

definitely established but was most likely related to the cauterization of the nasal turbinates and the severe nosebleeds which followed. This may have resulted in sufficient lowering of blood pressure and slowing down of the blood stream to cause a thrombosis of the small vessels. Purely supportive measures were advised, and psychiatric treatment was not recommended.

The patient was deeply grateful for the explanation of his symptoms, and over the course of the past 17 years he has experienced a spontaneous and gradual decrease in all of the symptoms with the exception of slight numbness on the left side which has not caused any great discomfort. Although the patient was fully prepared to embark on a full course of psychotherapy, he was delighted to learn that this was not necessary. The fact that he has worked productively with progressive advancement over the years without any psychiatric therapy speaks for itself.

Discussion

This case is particularly useful because it illustrates a number of points which have important bearing on present-day training trends in both psychiatry and neurology. Because of the excessive enthusiasm with which medicine had accepted psychiatry and psychosomatic theory there developed too great a tendency on the part of many physicians to conclude that any condition which could not be explained organically must, therefore, be caused by emotional conflict. Here was a patient who suffered considerable loss of blood following severe nosebleed. Following this he experienced symptoms which were interpreted as labyrinthitis. Obviously his physicians had been overly impressed by the emotional factors in the patient's background and were deflected from considering the possibility of a brain-stem lesion. They transmitted their concern about his emotional state to the patient's Washington physician who then proceeded to do a careful psychiatric history and also a Pentothal Sodium interview. When nothing of significance emerged he complied with the recommendation to refer the patient to a psychiatrist.

The psychiatrist, by the very nature of his work, is in a strategic position to encounter obscure medical and neurological disorders. Hypothyroidism, subdural hematoma, multiple sclerosis, and cortical atrophies are often diag-

nosed in the office of the psychiatrist who has a good medical and neurological background. The psychiatrist has a golden opportunity to observe the patient for long, unhurried periods of time. But unless he can see the patient through medical and neurological eyes he will be doing his patients a disservice. Most psychiatrists object strenuously (and understandably) to the private, unsupervised practice of psychiatry by laymen. One of the chief reasons cited for this objection is that the layman has no medical background and for that reason may permit an organic, neurological or medical condition to go undetected for long periods of time. If we are to deëmphasize the neurological training of our psychiatric residents any further, our graduate psychiatrists may no longer be able to suspect or detect the possibility of organic or neurological disorders. Psychiatry has for many years preached the gospel of viewing the patient as a whole. This cannot be accomplished without retaining a good working knowledge of medicine and neurology.

In all fairness it should be pointed out that other cases could be cited which would display the other side of the coin—cases in which a perceptive and psychiatrically oriented neurologist made the correct psychiatric diagnosis after examining a patient who had been referred for a suspected neurological disorder. I well remember a young man who came to the National Hospital, Queen Square, complaining of enlargement of his physiologic “blind spot.” His family doctor thought he might be developing a brain tumor. The neurologist, finding flat optic discs and an intact nervous system, made the correct diagnosis of incipient schizophrenia in a severely obsessional young man.

Summary

The long struggle between neurology and psychiatry is wasteful and anachronistic. It is high time that both specialties suspend hostilities and join forces, the better to understand and treat the patients who come under their care.

The neurologist cannot be a complete neurolo-

gist unless he is well trained in clinical psychiatry and retains his psychiatric orientation in dealing with his patients at all times. He must renew his respect for the fantastic power of the emotional forces in man and for the effectiveness of psychotherapy when skillfully applied.

The psychiatrist, on the other hand, cannot be a complete psychiatrist unless he is well trained in medicine and clinical neurology and retains his medical and neurological orientation in dealing with his patients at all times. He must be constantly alert to the possibility of organic involvement of the central nervous system and should never hesitate to call on the neurologist when in doubt.

In the power struggles and “jurisdictional disputes” which have often taken place between neurology, neurological surgery and psychiatry, several “solutions” have been suggested. In some medical centers neurology is placed under the Department of Medicine; in other centers it is a separate department. In some schools the Department of Neurological Surgery is dominant. In still others it may be combined with psychiatry as a “Department of Nervous and Mental Diseases” or a “Department of Neuropsychiatry.” The actual situation in any medical center is largely dependent on local tradition and the relative strength of the respective departments. It is not the purpose of this paper to recommend an ideal solution which would insure good training in both neurology and psychiatry to every candidate. Rather, it is my purpose to point out that the administrative organization of a medical center need have no relationship to the quality of training received by the neurological or psychiatric resident. If the relationship between the teaching neurologists and the teaching psychiatrists is cordial and truly collaborative, the details of departmental structure make very little difference.

Only by cultivating and maintaining a mutual respect for the highest ideals of neurology and psychiatry can we make our greatest contribution to progress in both professions and be most effective in relieving the suffering of our patients.

Fluctuation in Schizophrenic Behavior

An Approach to the Quantitative Study of Clinical Phenomena

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HISTORICALLY, the introduction of measuring devices into a field of inquiry has led to a rapid growth of the theoretical and practical power of that inquiry. The reason for this is fairly clear. When observations are obtained in numerical form mathematical tools are made available to the inquiry at the inductive stage; that is to say, the ability to think about the immediate results of observation is greatly deepened.

There is much room for argument about the usefulness of a quantitative approach to human behavior, and the pros and cons are too familiar to be worth repeating here. However, nothing is lost by attempting such an approach, and there is at least 1 set of clinical data in psychiatry which suggests that introduction of quantitative methods may be appropriate. I refer to the data originally collected by Rolf Gjessing on the phenomena of periodic catatonia.^{1,2} There seems to be no question that precisely timed behavioral cycles, apart from the familiar diurnal cycle, may exist in man. Schizophrenic patients manifesting such behavioral regulation are no different in kind from other schizophrenic patients, and their symptoms have not the slightest resemblance to the phenomena of psychomotor epilepsy.

This being the case, it appeared worthwhile to gather data on behavioral fluctuation in a group of patients known to vary with time. We hoped to find some who were exactly periodic and wondered whether the pattern of fluctuation would alter if we altered the environment drastically at a later date. In this preliminary study only very gross, although objective, behavioral data were obtained. We gathered from a 20-bed ward 13 patients who were said to exhibit strong episodic fluctuation. We obtained another 7 who were said to be stable. We resolved to keep the study drug-free when possible, excluding all patients who had to be maintained on psychotropic medication. Each patient was observed closely through his behavioral cycle

several or many times, and representative items of his behavior were placed on a check list. For example, the check list for 1 patient (Steve C.) included singing, whistling, whispering, loud talking, profane language, writing, dancing, echolalia, and lying on the floor.

The behavioral cycles noted were exceedingly rich in behavioral detail, but the general pattern was similar in most of the patients observed. There was a trough of extreme inactivity and mutism, with gradual relaxation and increase in level of activity, with some modest socializing. The gradual return of speech was followed by increasing evidence of excitement, with general noisiness, perhaps singing and other musical activity, increased autism of speech, increasing restlessness, and, at the very peak, the display of hostility and rage. After the latter there was in most cases an abrupt collapse back into immobility. This last transition was the only discontinuous one during most cycles. This description holds for most patients who did not display exact periodicity. We did have 3 true periodic patients, and in them the onset of disturbed behavior tended to be more abrupt than the subsidence.

Once the check list of behavioral items was selected (a different set for each patient) its use was established as a ward routine, and it was gone over by each person in charge of each 8-hour shift. The latter checked those items of behavior that he had noticed and marked with a zero those he had not noticed. A ward log of significant events was maintained, and a fair volume of independent narrative record kept of verbal content and general social behavior. We wanted to be open to evidence of simple environmental cuing for episodic changes.

The objective data consisted of time-series of checks and zeros, which would be handled in any way that seemed appropriate. We maintained a 10-month period of observation without any treatment activity (October, 1960

through July, 1961). During this time the ward received only custodial care apart from limited recreational activity. It was not a quiet ward, because the episodically disturbed patients kept the ward in frequent turmoil. In July, 1961 we began to observe very intensively; that is, ward physician and nurse spent time openly watching patients and the ward, whereas before the observational activity had been casual. We hoped to continue this phase longer, but the patients reacted to being observed by greatly increased interest in staff and much more excited and excitable behavior. Since we realized that we were involuntarily playing the role of therapists, all pretense was dropped and a milieu treatment program was instituted in August of 1961. This consisted of a good deal of group activity, casual group therapy sessions daily, and fairly heavily scheduled work and play, but with only mild pressure on patients who actively resisted participation. We were provocative without being very coercive unless we had a strong feeling that a coercive role would be useful therapeutically with a particular patient at a particular time. A natural experiment was introduced when the usual ward physician (T.R.) became ill in May of 1962, remaining away for 5 months, and then returning to his previous role. In addition, toward the end of the experiment, in June and July of 1963, there was a gradual reduction in the intensity of therapeutic activity and patients were informed of their impending transfer to a new service, where they were moved en bloc with the physician but without any of the nursing personnel.

Analysis of Data (Clinically Fluctuating Patients)

We had originally expected fairly sharp "bunching" of checks and zeros on most of the check lists, but this did not generally occur, and analysis of short-term segments of our various time-series revealed only a commonplace diurnal cycle, with peaks of activity in the morning, as with most people. There is a weak 7-day cycle apparently reflecting the let-down in stimulation on weekends. Otherwise, with the exception of 1 patient with a strong 48-hour cycle to be described later, the behavior of short segments from the check list was virtually that of random sequences. A variety of other approaches was tried, and only the most useful one will be presented here. It was decided to plot 14-day total scores of each check-

list item against time; that is, for each 14 days we have a number representing the number of shifts during which the given item of activity was recorded. (We needed a multiple of 7 as a time unit to eliminate the weekly cycle, and using only 7-day time units in most instances produced little suggestion of systematic variation.) In the interest of simplifying our initial approach we used only this time unit consistently. We took as a "score" simply the number of 8-hour shifts marked with a check for a particular behavior for a 2-week period. Most of the check-list items were of little value, because they were too infrequent, or because in some instances they were almost entirely constant. This did not reflect truly stable activity but simply that they were likely to happen at least once every shift, and therefore the record was flat. We knew indeed that they were occurring with great frequency at certain times, but we did not have the personnel available to do actual counts. Such frequency counts would be of course the ideal form of data. When an adequate volume and adequate variation in a set of behavioral items were obtained it was generally found that each item moved almost synchronously with every other for a given patient, and we often simply dropped items which turned out to be redundant. The exploration of the exact nature of the relation between 1 item of behavior and another was left for later studies, and we reserved only the simplest questions for this initial exploration. It was clear, however, that when we had a "good" item it reflected the general variation in activity level of the patient.

Each time-series analyzed here is a series of 2-week scores which have a possible range of 0 to 42 (42 shifts in 14 days). When each series is plotted against time we can make a general description of the pattern of fluctuation and of obvious responses to environmental change. We then screen the data by use of some simple devices suggested by that branch of mathematics known as the calculus of finite differences. We use these to examine the data for evidence of any strong relation between 1 score and the next score, or the next but 1, and so forth.

If we plot 1 score against the next on a graph, taking each pair of successive scores separately and independently, calling the first one Y_0 and the second Y_1 , defining Y_1 to be a function of Y_0 , we can often get leads to useful possibilities for further analysis. If we see that

a very strong positive correlation exists between 1 score and the next, and this would be apparent on such a graph, we would suspect a period length identical to the unit of time between scores or a simple multiple thereof. We would then be justified in using more refined methods of analysis for describing the system. No such very strong correlations exist in our time series, and we are obliged to conclude that stable periodicity is either absent or that frequent phase-displacements are occurring. Let us clarify this procedure by an example. Suppose we have a very simple time curve, such as a sine wave, e.g., $Y = 10 + 10 \sin (\pi/4)t$, plotted in figure 1. The values for times 0, 1, 2, etc. are:

t	Y
0	10
1	17.1
2	20
3	17.1
4	10
5	2.9
6	0
7	2.9
8	10

If we now list all pairs of successive values of this variable (Y), we have:

Y_0	Y_1
10	17.1
17.1	20
20	17.1
17.1	10
2.9	2.9
0	0
2.9	10

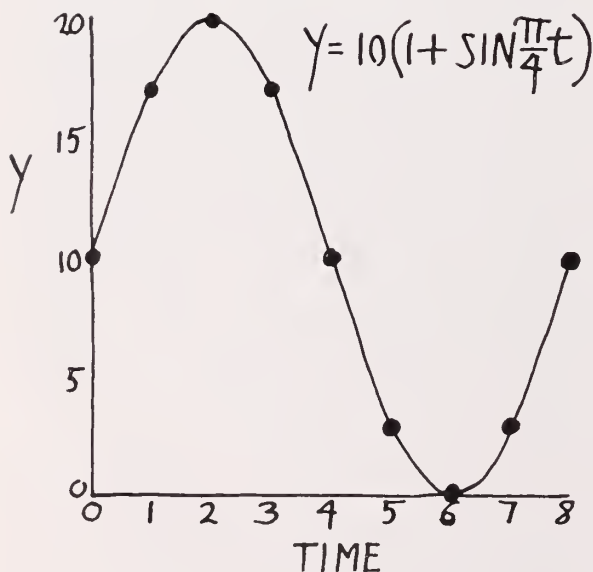


FIG. 1. Sine curve.

A functional relation exists between Y_0 and Y_1 , and we can make a graph of this which I have called, not quite accurately, a difference plot. If we plot these points and we also add in intervening points, we obtain an ellipse from which we can read off very simply mean values, amplitude, and frequency (figure 2). Since we

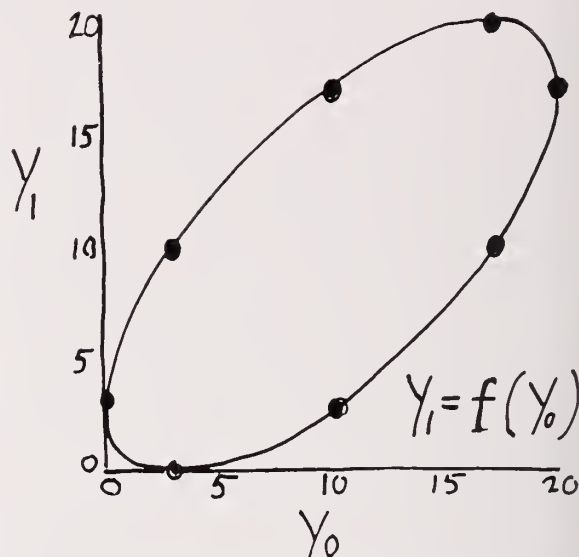


FIG. 2. Difference plot for sine curve.

know of course we had a sine wave anyway, it does not tell us anything we did not know. However, if frequent phase displacements were occurring we might not know that we had a sine wave from the appearance of its time course, but the points on the difference plot would still mostly fall upon an ellipse and we would gain useful information by going through the operation.

If the parent time-curve is one that oscillates but damps down with time, that is, decreases in amplitude like the vibrations of a tuning fork, the resulting curve on the difference plot would be a spiral which curls into a point as we trace it clockwise. If we had something that is oscillating out of bounds with increasing amplitude we would have a spiral expanding outward as we trace it clockwise. If, however, the time-unit selected happens to be exactly the period length of the process, whether it damps or not, the difference plot would be a straight line. Simple exponential growth or decay yield straight lines from whose angle with the horizontal axis the growth or decay constants can be read off.

The advantage of displaying data in this form is that while simple functional relation-

ships will still be clearly displayed, more complex systems, especially those exhibiting phase displacement, and switching back and forth between different processes, may have some of their underlying character revealed even when the latter is inapparent on the original time curve. It is a very simple approach, and preferable to use before more detailed and complex methods of analysis. The kind of data gathered in this study is not suitable for the latter, which will require a more refined kind of data-collection. The specific methods used here are very simple in principle: The 14-day scores are plotted against time and examined for obvious evidence of trend or simple periodicity. We can examine for gross environmental effect, that is, changes concordant with the time of crucial ward events. The next step is to construct a difference plot as in the case of the simple sine wave above. This may or may not reveal any time-invariant properties of the curve on inspection. The power of the difference plot is often increased if we can construct a directional difference plot; that is, we number each point according to its place in time and connect points with lines representing direction in time. This provides us with the path of a point or variable in time represented on the difference plot. This can be exceedingly complex, and it is not too satisfactory with our data, because the displacements in phase do not seem predictable from our fragmentary data.

If the difference plot contains much scattering of points we may try to classify the points according to some natural procedure in order to see if any greater orderliness is revealed. The method of classification, however, must not be arbitrary. We could not of course ever exhaust possible methods of analysis, but we could exhaust most reasonable possibilities. If we found no order in the points we would be obliged to think in terms of sheer environmental contingency. If we did achieve some order in the points we would hope to form from such classifications a predictive model, refined through trial and error attempts at actual prediction into an ongoing process; such predictive models would then be the basis for beginning theory-construction. In the study presented, however, we are only at the initial stage of inductive description, and we do not have as yet sufficient data to construct such predictive models. These, however, are in principle feasible.

The natural criterion we have used to classify the point-sets of the difference plot is simply

the mean range of the time-curve just prior to the curve values presented by a given point on the difference plot. We have used the simplest possible estimate of range, namely, the average of the 2 preceding scores. We then have a functional relationship in 3 terms, namely, the average of a pair of terms, and then we have the next pair of terms Y_0 and Y_1 . I refer to the average of a pair as M and rank every pair of values presented on the difference plot according to the value of M . We have in other words discarded time and replaced it with just-prior range, as a means of listing or ranking the pairs. We now replot the sequence, again plotting Y_1 as a function of Y_0 , but take them in order of the mean values of the preceding pair of points (M). We continue to plot points until it is apparent that we cannot draw through them an uninflected curve, unless it is a very simple inflected curve. If the next point plotted would require an inflected curve it is taken as the first point in a new point set and the plotting resumed until once again an inflected curve is required. We proceed in this fashion until all the original point-set has been accounted for.

The resulting set of curves yields a rough overall statement about the regulation, if any, of the given variable at different ranges of its possible values. These regulations may or may not resemble any homeostatic devices known to us, but when we see internal evidence of a regulatory or damping process we shall speak here of a "control device," but we mean only descriptively that the curve is behaving as if it were being regulated in some homeostatic fashion, that is, being brought into some relation to a base line or "normal" value or range. The nature of this method of analysis should become more clear as the clinical examples are presented. (The patients' ages given are those at the beginning of the experiment.)

Illustrative Cases

Case 1. Steve C. is a 47-year-old married white man, hospitalized for 17 years with a diagnosis of schizophrenic reaction, hebephrenic type. He had been described as displaying periodic alterations in mood long before the onset of his psychosis, which was characterized by hallucinatory confusion, delusions with homosexual content, and a mood of intense anxiety and depression. After some years of hospitalization he was described as relaxed and indifferent, cryptic in speech or mute, and a behavioral cycle was apparent with a markedly fluctuating activity level. On our ward he was noted to pass from extreme mute passivity and unresponsiveness to lively behavior,

with singing, whistling and dancing, followed by a grim hostile mood, and then an abrupt collapse back to the low point.

This cycle is of variable length and might run through in 1 day or require several weeks. A clear diurnal cycle is present, and when 2-week scores for either whistling, singing, or dancing are plotted, we obtain essentially the same curve as shown in figure 3, using whistling scores only as an index of behavioral level. We see a pattern of small oscillations of variable

first figure to the interior of the large closed curve, which might mean that oscillations of lower amplitude are being facilitated. However, we do not have enough data to clarify this. In the third figure the clockwise tilting of the curve from an angle of 45 degrees with the horizontal axis indicates a downward trend, and as if at high ranges a secondary homeostatic device is driving the curve downward again. This would account for the large slow waves on the original time-curve. We would have to say, however,

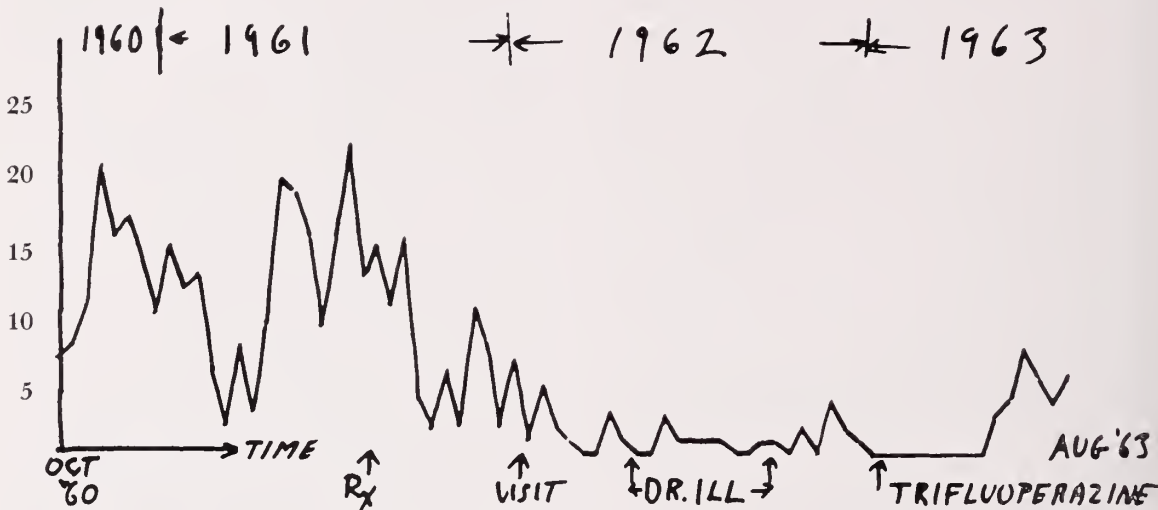


FIG. 3. Steve C. (whistling)

duration superimposed on large slow waves. There is no conspicuous response to initiation of a treatment program. However, there appears to be a dramatic subsidence of behavior following a visit by the patient's wife, who came at my request after an absence of 16 years. Steve was visibly terrified by the visit, and almost immediately afterward underwent a drastic clinical change, lapsing into a depressed and irritable state in which virtually no spontaneous rhythmicity was apparent. No such prolonged period of irritability and depression had ever been observed, and it seemed to be an immediate response to the visit. After about a year his aggressiveness increased to the point that it was necessary to institute drug treatment, and trifluoperazine was begun, January 31, 1963, as noted on the graph. This seems to flatten the curve entirely, but eventually activity was resumed, and it was now activity of the previous relaxed hebephrenic variety, with the depression evidently lifted. Unfortunately, we were not able to utilize the aggressiveness constructively as we had hoped. In figure 4 we see the difference plot, which does not permit any simple analysis, except that it seems to possess 2 natural ranges of oscillation, the points seeming to fall into 2 distinct large clusters. The subsets, obtained by ranking by M-values as described and M defined as the average of the 2 preceding scores, yield a set of quite open curves without any evidence of adequate capacity for damping or stabilization (figure 5). Drug administration seems to have moved the points in the

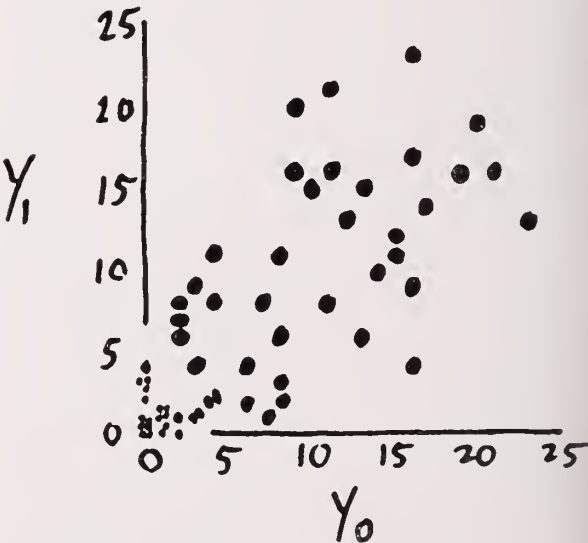


FIG. 4. Steve C. Difference plot.

that in terms of adequate homeostatic requirements this is a very poor system because it rarely can stabilize. The only periods of stability coincide with an episode of intense and unhappy reactive depression and the administration of phenothiazine medication (and the latter only temporarily).

Case 2. Maynard D. is a 52-year-old man hospitalized for 30 years with a diagnosis of schizophrenic re-

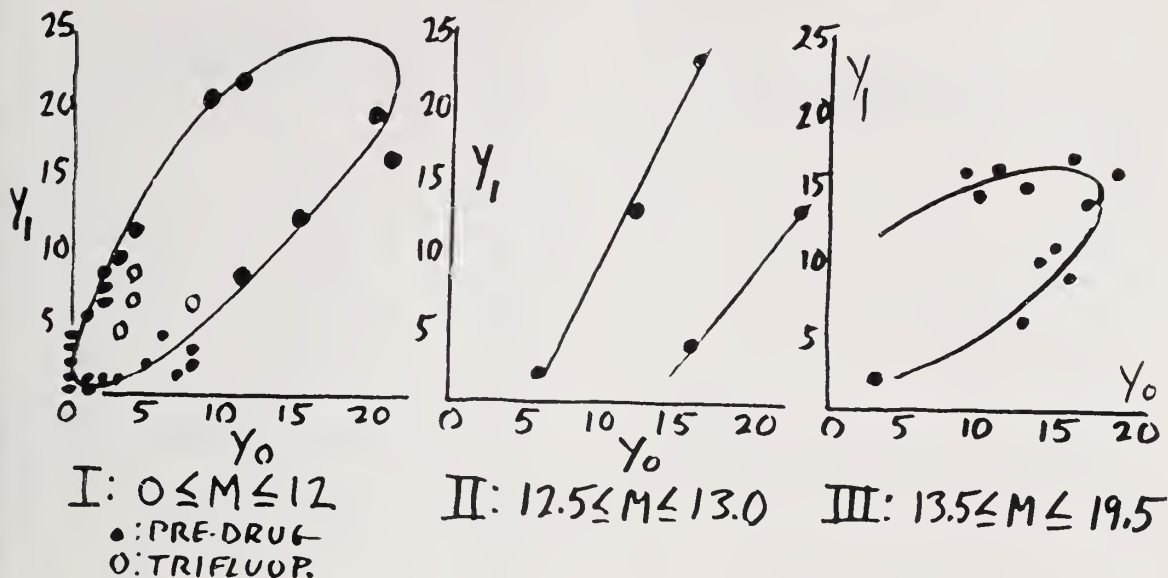


FIG. 5. Steve C. Subsets from difference plot.

action, catatonic type. Behavioral fluctuation is described in his record for many years, with low points of indifference and passivity and high points of rather wild, destructive behavior. His speech was noted at times to be florid and autistic, and at other times sparse and empty. Through the years this cycle attenuated, until the time of the beginning of this study, when he could be described as fairly affable, usually placid, courteous in manner, though often seclusive, working endlessly by his own choice on ward details, conversing fairly readily and in a reflective vein when approached. On occasion, however, he displayed sudden episodes of violent rage, discharged only verbally, with wildly paranoid vituperation and cursing, these spells turning on and off abruptly. The

only useful check-list item was simply the occurrence or nonoccurrence of a spell of cursing on a given shift. Two-week scores are plotted in figure 6. There seems to be a marked environmental effect, in so far as the curve is fairly stable during the control period, but following the onset of the treatment program marked oscillations dominate the record, with settling down only toward the end as treatment activity was tapering off. Adequate damping seems attainable at a low range of behavioral volume (9 or 10 score units on the graph).

The original difference plot, not presented here, is not very informative, but again classifying into subsets according to the just-preceding range, in the same fashion described, gives the point-sets of figure 7, with

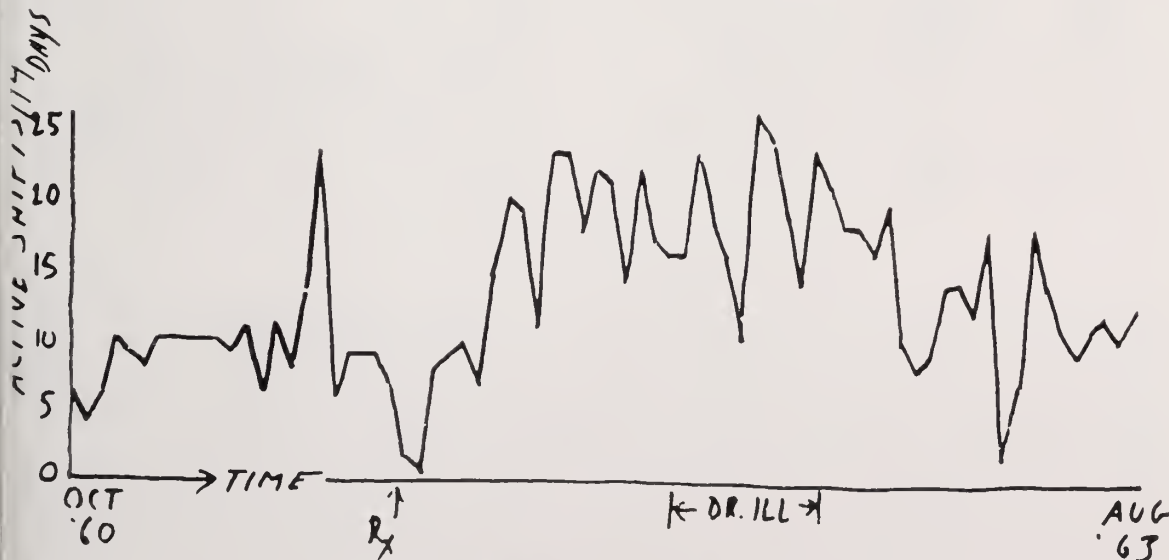


FIG. 6. Maynard D. (cursing)

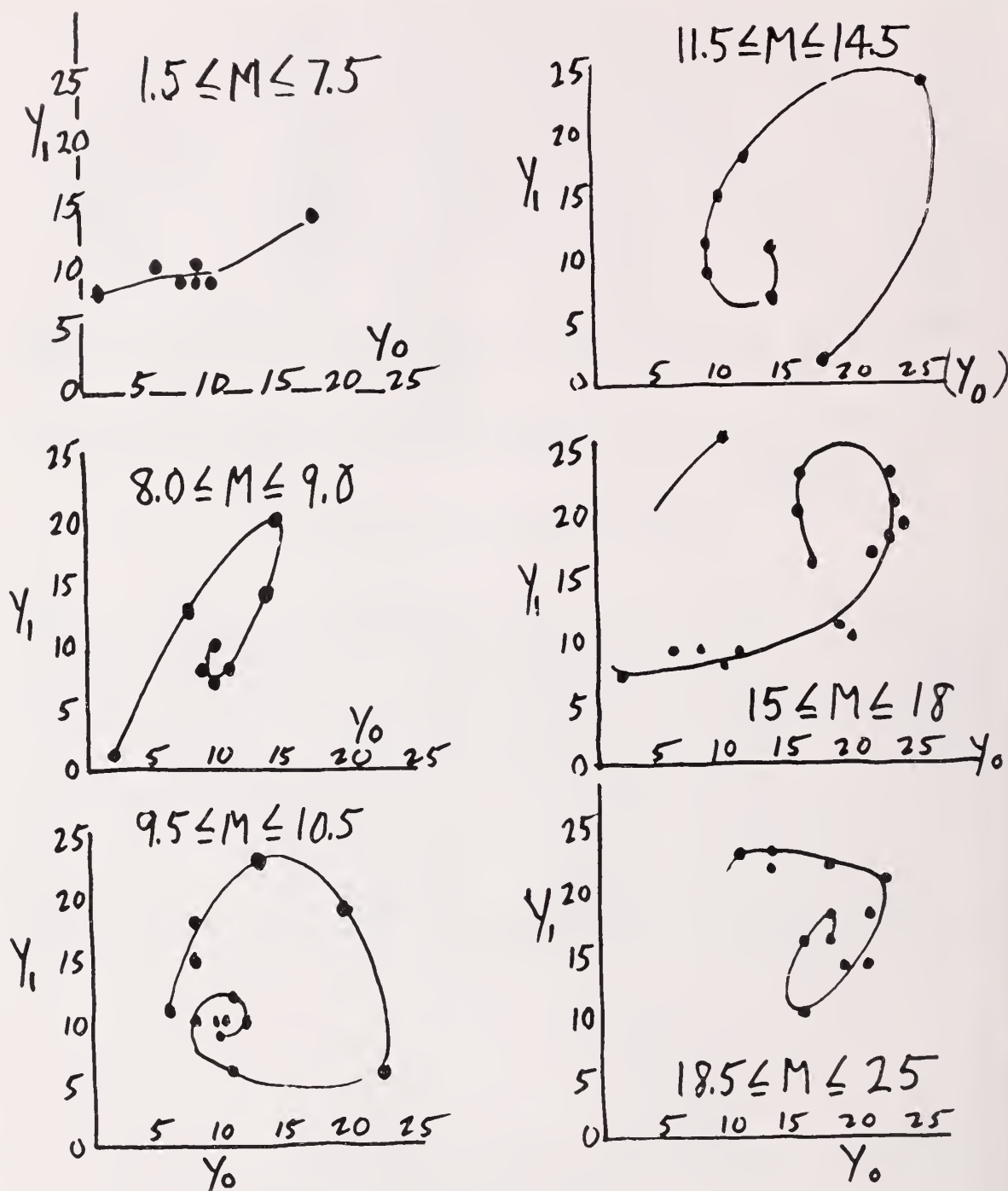


FIG. 7. Maynard D. Subsets from difference plot.

the curves suggested by them. These curves cannot be taken too seriously, because there are too many of them and too few points, but there are no simple alternatives. At a low range we see evidence of fully adequate homeostatic control; that is, a point in any range tends to damp rapidly down to 9 or 10 units. With increase in range we see a continued ability to damp down to the same range, but with larger excursions in the process. At higher range we see frankly defective homeostatic devices, which tend to progres-

sively increase in amplitude. At high ranges, although the exact shape of the curve is obscure, the operation seems to become more efficient again. (In general, dilated curves mean wide excursions in amplitude, and tight curves mean narrow excursions.)

We obtain a glimpse of a system probably consisting of 3 different control devices, whose parameters probably change continuously, with increases in the level of excitation being acted upon. There is evidence of a natural baseline in the range of 9 or 10 score

units, that is, an excitatory range where stabilization is possible. Detailed examination of the record indicates frequent phase displacements, and predictive rules are not apparent from this simple approach.

Case 3. Clarence D. is a 36-year-old man who was initially included in the control group since no behavioral variability was detectable, except diurnally. He was mute, moderately restless, and engaged in an incessant manneristic behavior with occasional adoption of bizarre, fixed postures. However, the relative volumes of such behavior did not seem to vary from day to day. As the treatment program got underway he began to display increased irritability and behavior suggestive of jealous spite. He very gradually developed a marked behavioral cycle with marked restlessness and increased manneristic behavior alternating with 1- to several-day intervals of extreme motor passivity. The initial hostility gave way to increased

friendliness with the staff as time went on. We begin to use a check list only in March 1962, and 1 month later he began to converse amicably with the staff. The time-curve for 2-week scores for "pacing" in figure 8 covers a period of progressive clinical improvement with regaining of speech and positive social behavior. The separation of point-sets by ranking M-values indicates a simple set of curves that appear to have some capacity for spiraling, that is, damping to a baseline. This seems to be never completed, suggesting that although damping can occur it resists extraneous influence poorly and is too readily disturbed for the maintenance of a baseline.

Case 4. Milton E. is a 44-year-old man with a 25-year history of profound apathy, whose diagnosis has been schizophrenic reaction, hebephrenic type, because whenever he has spoken the content has been utterly disconnected and bizarre. Under socially stimulating

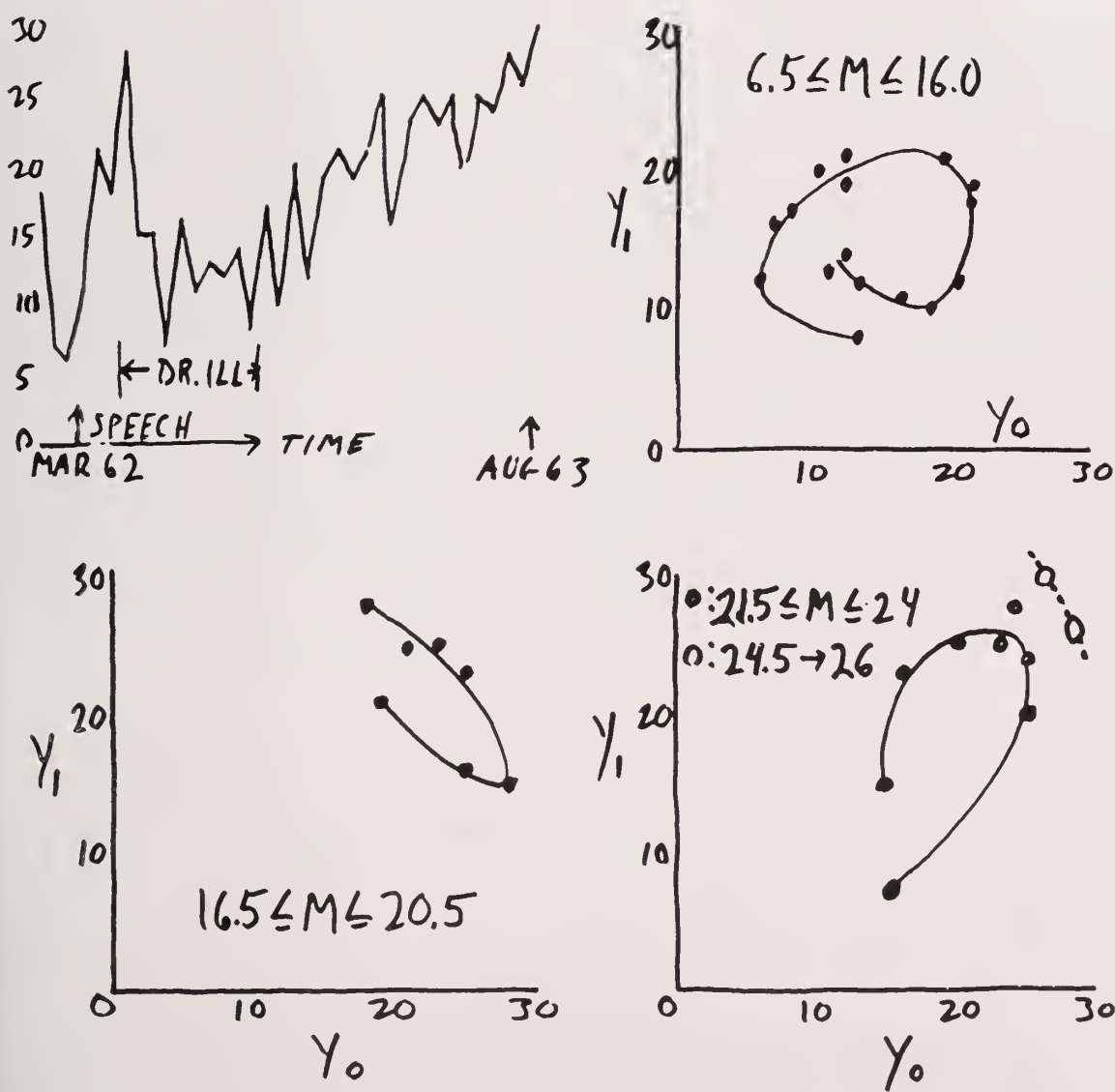


FIG. 8. Clarence D. Time-course and subsets (pacing).

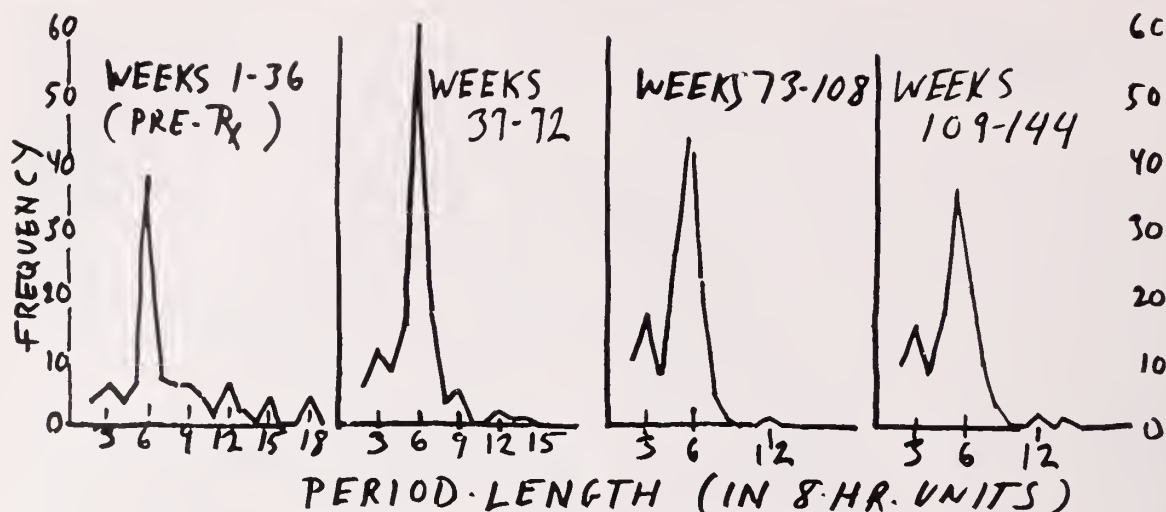


FIG. 9. Milton E. Frequency distribution of period-lengths.

ward conditions a strong 2-day cycle is very apparent, with alternating days of mute inertia and noisy, restless behavior. This cycle is weakly present under non-treatment conditions but tends to "run down," the patient remaining uniformly apathetic for long stretches of time. The check-list items of cursing, laughing or talking behaved in a similar fashion, and in plotting the data I have used a compound item signifying presence of any of these behaviors. The 2-day cycle when manifested is very striking, and the contrast in behavior is extreme. On the "low" day Milton is very inert, expressionless, and mute. At the peak, on the following day, he is lively, paces and talks incessantly, "chain smokes," slaps people, curses, and exhibits a wide range of vivid and nearly uncontrolled affect. The 2-day cycle is most clearly displayed by a frequency distribution of period-lengths, defined as the time between one onset of a run of activity and the next onset of a run of activity. Thus, if we have a series 0++++00++++0, where + means any talking or laughing, and 0 means none, we would say

there were 3 successive runs of 3, 2, and 1 shifts duration respectively, with period lengths of 5 and 6, that is, 40 and 48 hours respectively. If we divide the period of data collection into 4 equal segments of time, each of 36 weeks' duration, and construct a frequency distribution of period-lengths for each segment (figure 9), we see sharp-peaking at 6 shifts, or approximately 48 hours, intensified after treatment, with falling out of other longer periods. Eventually competition appears from the 3-shift or diurnal cycle and suggests that the 2 day-cycle occasionally reported in the psychiatric literature^{3,4} is derived from the normal diurnal cycle and tends to revert to the latter when the given oscillating variables revert to a more manageable range.

The time course of 14-day scores (eliminating the effect of the 2-day cycle) suggests some fairly strong environmental effects (figure 10). The institution of the treatment program is followed by a sustained increase in volume of activity, with little initial change in oscillatory pattern. However, during the interval of

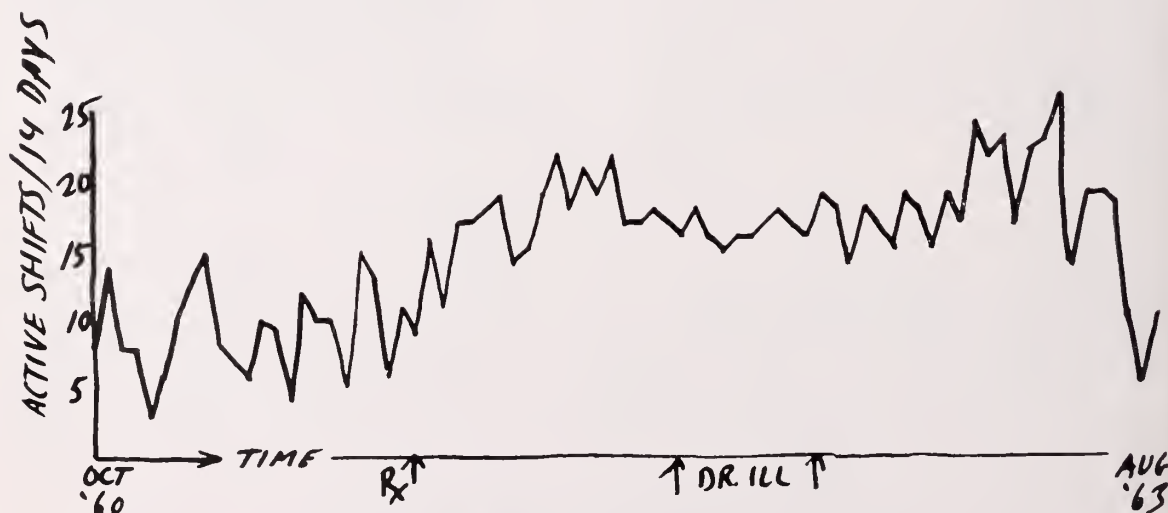


FIG. 10. Milton E. (talking or laughing)

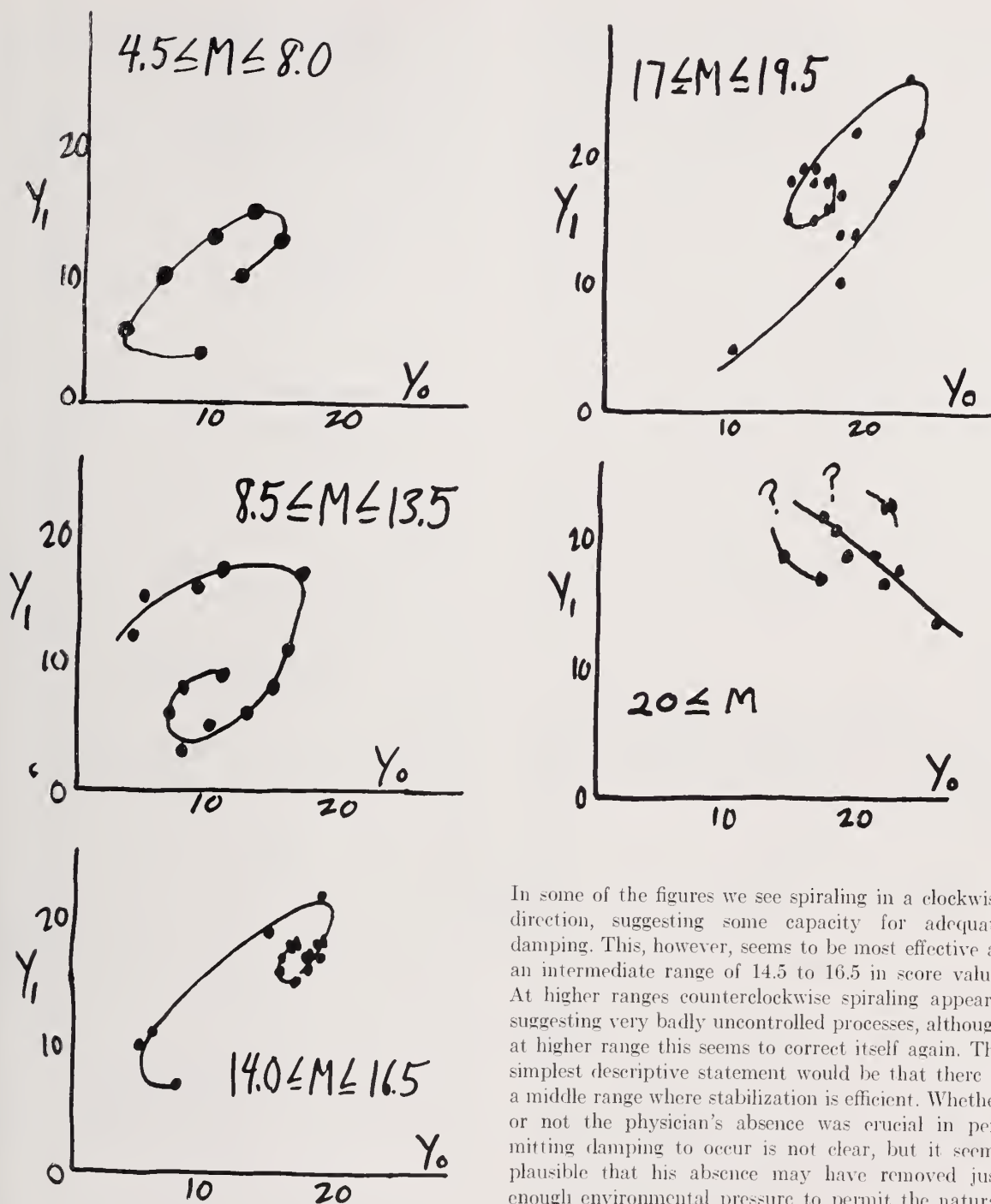


FIG. 11. Milton E. Subsets from difference plot.

the ward physician's absence due to illness, the curve, although remaining at a higher range, stabilized, the stabilization breaking down after his return. The 2-day cycle is not much influenced, although during the early weeks of T.R.'s absence, phase displacements were frequently noted on the actual check-list record. There is a falling off in the level of activity at the end as with most of the patients on the ward. The difference plots obtained by classifying points according to mean preceding range are shown in figure 11.

In some of the figures we see spiraling in a clockwise direction, suggesting some capacity for adequate damping. This, however, seems to be most effective at an intermediate range of 14.5 to 16.5 in score value. At higher ranges counterclockwise spiraling appears, suggesting very badly uncontrolled processes, although at higher range this seems to correct itself again. The simplest descriptive statement would be that there is a middle range where stabilization is efficient. Whether or not the physician's absence was crucial in permitting damping to occur is not clear, but it seems plausible that his absence may have removed just enough environmental pressure to permit the natural operation of the system. It does seem likely, however, that the disability imposed by the failure of the 48-hour system to damp adequately is much more severe, and the behavior of the longer-range control devices may be relatively unimpaired in this patient, if to be unimpaired means to possess parameters permitting damping down to a baseline.

Case 5. George I. is a 58-year-old man with a 27-year history of paranoid schizophrenia. He is a mild diabetic controlled by diet alone and suffers from occasional angina pectoris. He exhibits marked swings of mood and activity level. There is a mute stage of in-

activity with flattened affect, although with continued concern for his clothes and general orderliness. At other times he takes a more lively interest in the environment, with ordinary prosaic conversation occurring and giving way to loud declamation, lecturing to an unseen audience about a number of favorite topics, all of them of intensely paranoid thematic content. The upward transitions are gradual, unlike the case of Maynard D., for whom they are abrupt, and there is never any real loss of control. George seems to be enjoying himself to some degree near the peak of his excitement, but he slides as rapidly back to inert mutism as those patients who seem more acutely miserable at their peak. The most useful item for the check list is the presence or absence of paranoid monologue, referred to on the check list as "talking to voices" because there was full agreement among personnel about the meaning of this phase. The record is incomplete due to earlier inconsistent recording, so that the record does not begin until May 1961 and is interrupted from August 8, 1961 to September 18, 1961, during which time he was transferred to surgery for a hernia repair. However, the short stretch of pretreatment record in figure 12 does not seem much

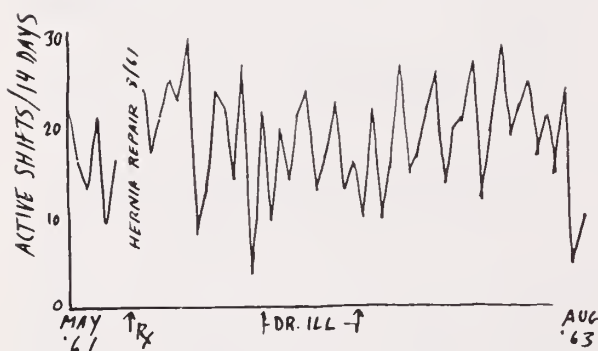


FIG. 12. George I. (paranoid monologue)

different from that following institution of treatment, and George was noted to stay aloof from most aspects of the program more successfully than most of the patients. He does, however, show with the others a declining rate of activity toward the end of the study, and at the time we thought he was depressed because of the impending separation from certain nursing personnel to whom he had become quite attached. There is an apparent tendency for mean period-length to increase from about 8 weeks to 12 to 14 weeks. The difference plots (figure 13) resolve into a series of quite dilated curves suggestive of closed curves of inherently large amplitude. At high ranges some kind of damping seems possible. In general this system would seem to be very poorly regulated, as regards its capacity for stabilization.

Case 6. John K. is a 50-year-old man with a 30-year history of vegetative living, during which he was noted to be withdrawn, indifferent, and either entirely

mute or displaying only unintelligible speech. During the control period he was dirty, relaxed-appearing, and continuously inactive except for facial grimacing and occasional grunting. Like Clarence D., he had been placed in the control group because he seemed not to be fluctuating. However, during the month of intensive observation he seemed to rouse considerably and began talking a little, mostly in an apparent attempt to depreciate the physician to the other patients. As the treatment program began, new pieces of behavior appeared, such as petty, spiteful behavior, and singing, whistling, long speeches, and restless pacing back and forth. Unfortunately, we missed the early evidence of strong rhythmicity, and data collection begins only in May, 1962. The behavioral cycle is one of mute indifference, giving way to pacing, solitary singing, declamatory speeches, and return to mutism. Verbal content was excessively grandiose but with occasional well-turned phrases. The best check-list item was the presence or absence of singing, especially as his secretiveness meant that only clearly audible behavior would often be noted.

As in the case of Steve C., we see 2 large waves (figure 14) with smaller waves superimposed. There is a steady drift downward. Unfortunately, as with Steve C., the appearance of assaultive behavior made it necessary to institute phenothiazines (chlorpromazine, May 21, 1963). The same clinical change had occurred in John K. as in Steve C., and both exhibit the same general pattern of oscillation. There was a trauma for John as in the case of Steve, but it cannot be given an exact date. John had been very close to Clarence D. and to no other patient, and when Clarence improved he rejected John as he moved toward personnel. This, however, had been developing throughout the year prior to John's eruption into frankly hostile behavior, and the relationship in time is entirely unclear. Separating out the subject from the difference plot by the range of M-values yields a set of widely dilated curves with no evidence of any ability to damp or stabilize at all except for the curves shown in the first figure, suggesting the possibility of trends toward zero values. In other words, requirements for stability are very strenuous, requiring perhaps extreme social withdrawal and vegetative living as the only feasible homeostatic adaptation.

Discussion of Results

Although these data must be taken as suggestive only, because we are not able to construct predictive models, an hypothesis is suggested that is of a testable kind. The point-sets obtained suggest that a variety of homeostatic defects are present in the behavioral records examined, generally consisting of an inability to stabilize or damp down to a baseline except under very narrow and restricted conditions. That is to say, with the exception of

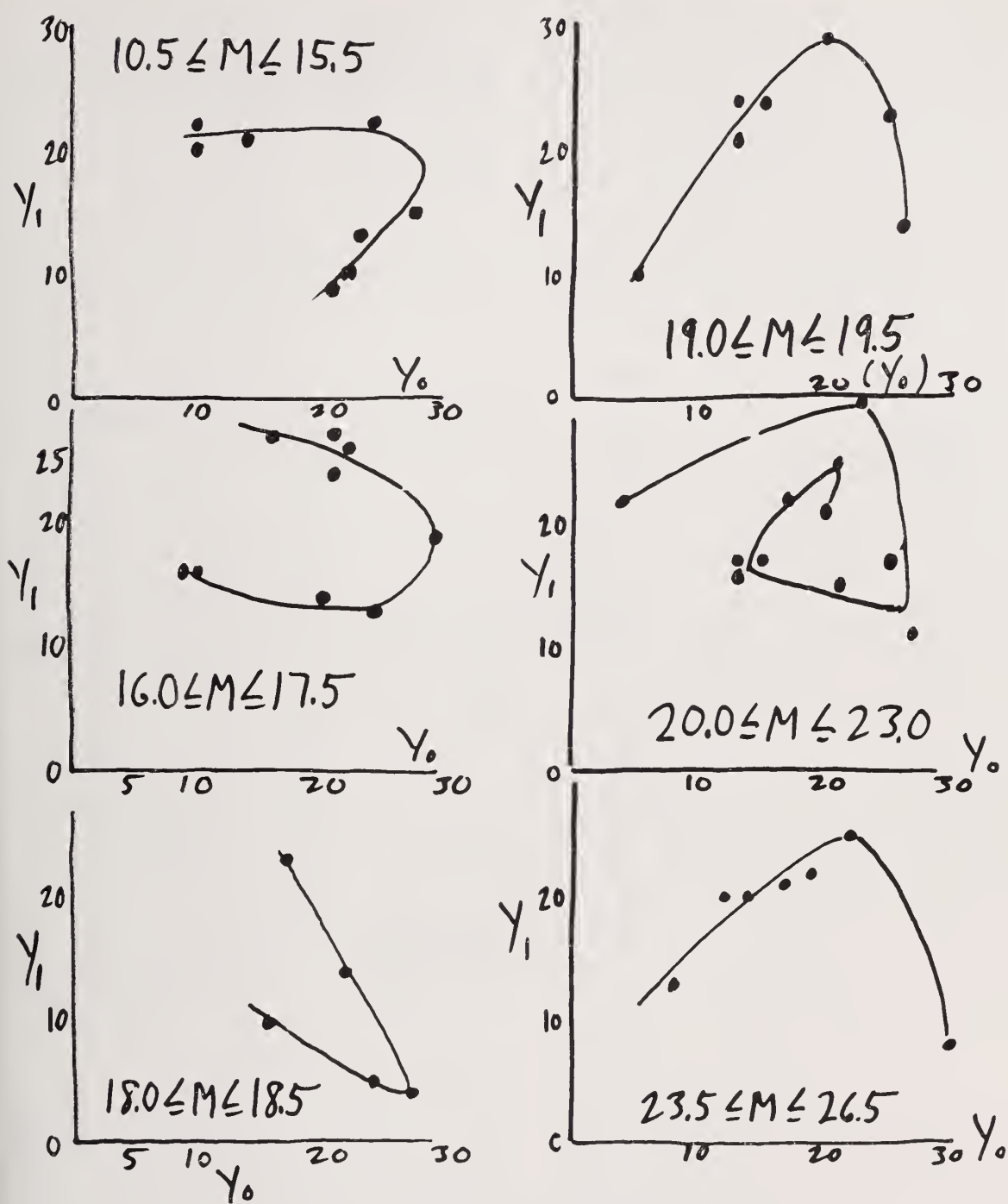


FIG. 13. George I. Subsets from difference plot.

these very limited conditions, these curves are inherently unstable.

We may state the hypothesis in more clinical terms. In certain instances of schizophrenia the immediate source of disability is an inability to properly regulate central excitatory states. The control mechanisms operative (nature unknown) fail to damp excitatory-inhibitory systems to condition of adequate stability for adap-

tive living. (Presumably, excitatory processes must be maintained within fairly narrow limits of fluctuation for creative adaptation to any environment.) Stabilization, when it can occur, requires either very rigidly controlled environmental situations or, more commonly, severe withdrawal from all potent environmental stimuli.

If we pursue the hypothesis further we have

to allow 3 possible etiologies for the hypothesized defect: (1) a constitutional origin, (2) a biologic defect resulting from maturational failure, and (3) simple learning deficit.

The design of further studies is clearly suggested by the above considerations. Richer data must be collected so that more points are available for analysis and for the construction of predictive models, including rules for prediction of phase displacement. Only by their predictive ability can the above descriptive statements be confirmed. A wider diagnostic range of fluctuat-

citement previously noted to involve instability. Change in clinical status without change in the parameters of the time curves would implicate an irreversible biologic factor strongly; change in the parameters parallel to clinical change would implicate a simple learning deficit.

The fragmentary data presented seem to indicate that the curve parameters are fixed while clinical status is not, and implicates biologic issues. This remains to be explored by more extensive and prolonged data collection.

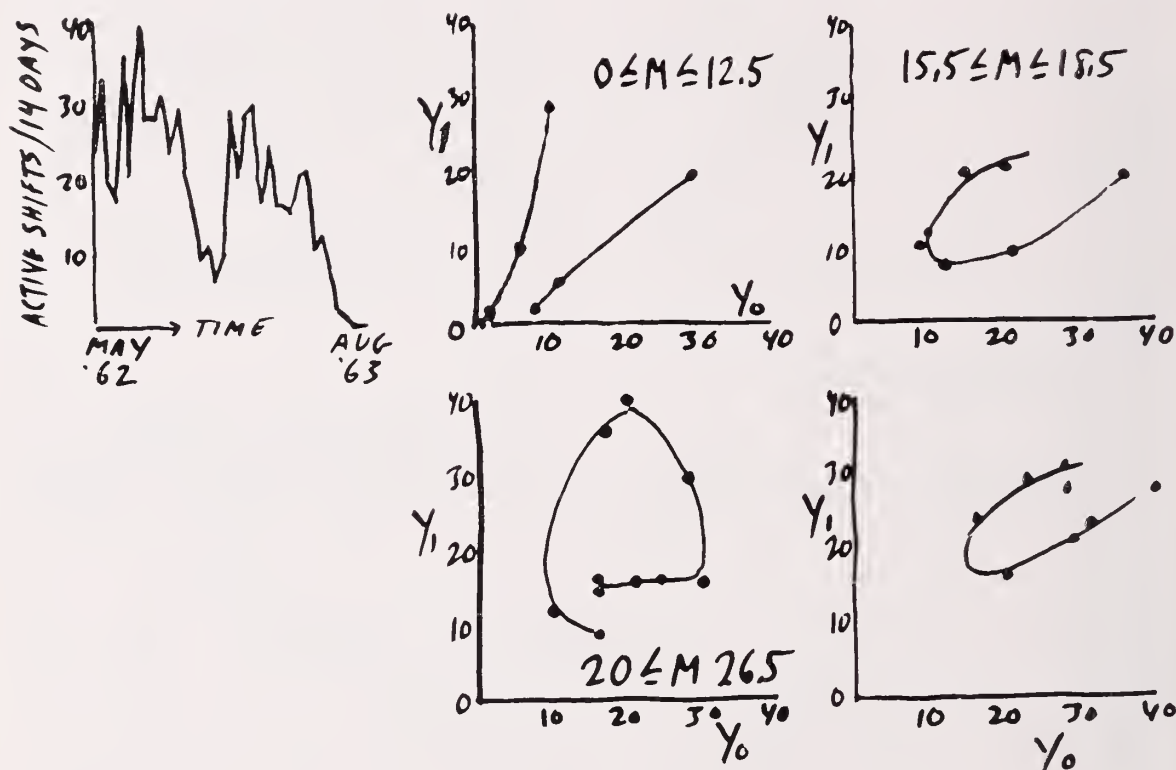


FIG. 14. John K. (singing)

ing patients must be included (organic and affective disorders) to establish the specificity, if any, of these presumed homeostatic defects to schizophrenia. Seemingly stable schizophrenics, like Clarence D. and John K., must be exposed to stimulating environmental conditions to determine whether or not they too will display this sort of deficit once roused behaviorally. Finally, the maintenance of intensive treatment programs without drug therapy over more protracted periods will help to suggest the relative importance of irreversible biologic defect and simple learning deficit. The design of treatment would be such as to support acquisition of appropriate skills and behavior at levels of ex-

Methodologically, it is to be anticipated that any predictive models formed from such data would be geometrical, that is, consist of difference curves from which predictions will be made by geometrical extrapolation. Converting these geometrical functional relationships into algebraic form would at this stage be a questionable affair which would add no knowledge or predictive power to the approach.

Summary

Time curves of behavioral fluctuation in 6 chronic schizophrenic patients have been ex-

(Continued on page 549)

The Meaning of Mental Health*

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"Man is the only animal that laughs and weeps; for he is the only animal that is struck with the difference between what things are, and what they ought to be."

— WILLIAM HAZLITT

PERHAPS MAN'S MOST IMPORTANT and distinctive characteristic is his ability to think and to develop abstract ideas. Concepts, working assumptions, and beliefs are important because the social institutions and programs developed by mankind for the management of his group and individual problems are based on them, whether or not they are explicitly recognized or expressed. It is mankind's current fundamental concepts, as they relate to man in general and the mentally ill in particular, that determine how mentally sick persons are regarded and the nature of programs developed for their treatment.

Since man originates, perpetuates, and discards ideas, it is not surprising that he has some about himself. One of the most fundamental is that man is important—important as a person and as a species. From this flows the notion that he, as a person and a member of various groups, is entitled to certain rights and respect within the bounds prescribed by the larger society of which he is a part. Of course, various societies and cultures place different weights on the relative value of a person and of the society to which he belongs. It follows, on philosophical grounds, that most forms of society, and particularly a democracy, can survive only so long as certain personal human rights and dignity are honored and respected. An erosion of such rights and dignity is usually an erosion of democracy itself.

What are our concepts about the causes of mental diseases and the treatability of the mentally ill?

When it was widely believed that mental illnesses were the result of demoniacal possession or the failure of the afflicted person to adhere to certain moral principles, it is not

surprising that the so-called program of that period consisted primarily of driving the sick out of the group and abandoning them. If such beliefs were widely held today we would not even be thinking of patient-centered, comprehensive mental health programs that will allow prompt access to services appropriate to each patient's particular needs. Such programs are now being planned and developed. However, since the archaic concepts earlier mentioned were generally held all too recently, we are still occasionally troubled by persons who appear to retain at least the shadows of those notions.

The basic causes of mental illnesses are now believed to be found in medical, psychological, and social areas capable of being, though not yet, fully understood. With these beliefs comes the concept that mental patients are treatable—that recovery and improvement are possible. Indeed, this is now the rule rather than the exception. Approximately 80 per cent of the patients who entered our Hospital in recent years returned to community living within 1 year of their admission. However, because there is much knowledge yet to be gained, and too few to apply well what is now known, we must develop not only enormously expanded comprehensive treatment programs encompassing a wide variety of services, but also greatly enlarged, high-quality research and training activities.

We are through with the basic concepts that led to the development of "out of sight, out of mind" asylums for the mentally ill. But because of the massive size of the problems, we shall be fortunate indeed if we can, in 1 generation, develop modern programs based on our current beliefs, knowledge, and operating assumptions.

We are in a period of rapid change, of increasing professional and public awareness of the nature of the problems and possible solu-

* Based on an address delivered at the Washington Cathedral in Washington, D.C., April 25, 1965.

tions, and of an increasing readiness on the part of the public and of professional persons to carry out really effective programs. And the more effective the services, the more ready will ill persons be to seek help at an early stage of their illnesses when the prospects for successful treatment are most favorable.

What persons are most important in the development of these needed programs? First are the present and potential future patients, without whom there would be no need for mental health programs. Those who provide and support such activities must ever keep the best interests of the patients to be served in the forefront of their thinking. Are the services organized and operated primarily for the benefit of the patients, or do issues of professional status, convenience of staff, or of personal and organizational self-aggrandizement sometimes get in the way? To the patients must be added the members of the public, only through whose enlightened understanding can modern preventive and treatment services be developed and supported. They both use, and pay for, mental health services. And they pay a heavy human and material price for their current underdevelopment. Last, but certainly not least in this triumvirate, are the professional and other persons who directly provide services. Without them there can be no program. And while mentioning those who give service to patients, let me pay special tribute to the over 1,000 dedicated volunteers who regularly give of themselves to the patients at Saint Elizabeths, and to the thousands of other such volunteers throughout the country who, by their daily deeds, demonstrate their high regard for the worth of their ill fellow human beings. While I know they are well repaid in the satisfaction and self-respect gained as a result of their actions in behalf of our patients, staff, and myself, let me thank them, not only for caring, but for caring enough.

These volunteers and the many dedicated staff members serving the mentally ill epitomize one of man's noblest characteristics—his sense of responsibility, not only for himself but to and for other men. This involves spiritual and ethical values that go beyond the mere practical necessity of caring for the mentally ill in order to have a smoothly functioning society.

What is mental health—that dynamic state to which we all aspire and from which we all, being human, deviate in some degree? A discussion of what mental health means to me must

necessarily be oversimplified because of space limitations. I shall use the framework developed by Dr. Erik Erikson, a psychologist who has written extensively in an effort to combine facts and theories developed over the years by a wide variety of scientists and therapists who utilized many different approaches and methods in their search for knowledge. Dr. Erikson speaks of 8 critical developmental periods through which all of us pass on our journey from birth to death. During each such period we grapple with a primary psychologic problem, but not to the exclusion of those problems that have gone before or will achieve greater prominence in the future. Our struggles to solve these problems are sometimes quite conscious, but more often unconscious. The critical problems are never fully settled, even for the mature, mentally healthy person, but must constantly be solved and resolved as we gain in age and new experiences. As a consequence of this repeated problem-solving, we develop what Erikson calls "a sense" in relation to each critical period and its primary psychologic problem.

Starting with the very young infant, the critical problem he faces is to develop a "sense of trust"—trust in his environment and trust in himself. The newborn human infant is a relatively helpless creature. He must be loved, fed, clothed, and warmed. When he feels discomfort he can only cry, and while very young he may not always be able to tell what makes him uncomfortable. He cries; mother feeds him, changes his diaper, changes his position, fondles him, or provides other services. If she is discerning about the source of his discomfort and prompt with the appropriate remedy, the infant comes to trust that his environment will provide for him and trust himself to be able to call for help when it is needed. He is developing a "sense of trust" or mistrust depending on his experience with mother and significant others in his immediate environment. I think you will grant me that we all have problems in the area of trust for the rest of our lives and that these must be constantly solved and resolved. Can one realistically trust person A, B, or C? Can he trust himself in this situation, that, or another? Does he have the needed skills and the self-confidence to go with them? Can he trust in God?

The second "sense" of which Dr. Erikson speaks is that of "autonomy." This has to do with one's ability to control parts or all of his

body, other persons, things, and ideas. As the baby learns to roll over, to sit up, to walk, to control his calls to nature, to want and play with toys, he is developing a sense of autonomy. As he gains control of himself, he controls mother, or attempts to, by "retaining" or "letting go of" at the proper or improper time and place. Autonomy has to do with conscience, self-respect, and respect for others. The "sense of autonomy" or independence may be at stake for both the parents and their adolescent child when their respective wishes are in conflict. Is there such a problem when a breadwinner is forced by illness or age to play a dependent role? Did you ever hear it said that "A man's home is his castle"? Yes, problems about this "sense" must be solved and resolved all of one's years.

And then there is the "sense of initiative." This is the principal psychologic problem for the child of 3 to 5, but problems of this nature start earlier and continue forever. At that age a child is freely ambulant, no longer a toddler, but a runner and a climber. He is curious. He wants to learn. He wants to try it for himself—feel it, hold it, taste it, poke it, drop it. You can often tell about how much initiative a child of this age is taking, or is permitted to take, by the "high water mark" in the rooms he frequents, below which mother does not allow loose objects to be kept. Our society puts a great deal of store in initiative. One man even said he preferred bird dogs to setters when it came to finding jobs. Learning what one can and should do within the bounds prescribed by society has to do with this "sense."

Next comes a "sense of industry" or coöperativeness. It is no accident that most children start school about the age of 6. Watch the children in a nursery school. Most are playing by themselves even though many children may be present. They are playing alone, together. Look in on a group of first or second graders. They are usually working and playing together. They are learning to work individually and collectively in a coöperative manner and to take pride in their achievements. They are developing a "sense of industry" and coöperativeness. I need not dwell on the importance of this sense to the adult.

During adolescence the development of a "sense of identity" is primary. Unconsciously and often consciously such questions as the following are asked: "What kind of a person have I been, am I now, and will I be?" "Whom

am I like? Unlike?" "Am I an Episcopalian, a Roman Catholic, a Jew, a Negro, an Italian, an American, a conservative, a member of a minority in my community? I want to 'belong,' yet I want to be recognized as an individual in my own right." Identity problems are not limited to the adolescent period. Do many of us now wear the clothing popular in 1925? No, it must be of the current mode. Did you ever hear of a lady who went to a party and found there someone who had on a hat identical to hers? It seems human to want to belong and yet be distinctive—a "sense of identity."

Following closely is the problem of "intimacy." While still developing a sense of identity, we compare ourselves with others, share views, and explore our own thoughts. Did any of you install an extra phone for your teenage daughter so you would have access to such an instrument while she was sharing views with her friends? Did you ever do as I did and eavesdrop a little, of course through inadvertence? Were they discussing rather personal views? How can one become well enough acquainted to form lasting friendships, or to marry with a reasonable chance of success, without first sharing ideas and exploring mutual interests? To do so one must expose one's own beliefs and views. The person with a well-developed "sense of intimacy" is one who can afford to reveal himself and be "close to" selected others within the bounds of his society.

But 2 more "senses" remain for comment. One of these, "creativity" or "generativity," is the crucial problem of young adults. This is the time of marriage, of begetting children, creating ideas, doing work, and making objects. Young people, and others for that matter, produce. The questions are: Is there a felt need to create? Are the children or things produced nurtured for their own sake or that of society, or are they merely the means of self-aggrandizement? Did it ever appear to you that a mother, by providing numerous material advantages to her daughter, was trying to explain her own shortcomings, or to experience through her daughter's achievements and conquests satisfactions she missed? Do fathers always have the best interests of their sons at heart when they demand unrealistic achievements on the playing field, in the classroom, at the fraternity, or in business? The important element in a "sense of creativity" is that of nurturing primarily for the benefit of the person or thing created or of

(Continued on page 568)

Hysteria, the Mimicry of Disease*

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THOMAS SYDENHAM, the English Hippocrates of the late 17th century, is famous among other things for his description of hysteria as "the mimicry of disease,"¹ an affliction so protean and ubiquitous that "few of the maladies of miserable mortality are not imitated by it." The incidence of hysteria and its characteristics have fluctuated widely, both before and since Sydenham, but, despite rumors of its demise in certain quarters, hysteria is still very much with us today.

Hysteria means wandering of the womb, and the ancient Greeks believed that that organ, "when remaining unfruitful long beyond its proper time, gets discontented and angry, and wandering in every direction through the body, closes up the passages of the breath and by obstructing respiration, drives them to extremities causing all varieties of disease," in the words of Plato's *Timaeus*.² Captious scientists today might object to this concept of a mobile and vengeful uterus, but they would be likely to feel that such a naturalistic explanation suggesting the importance of sexual factors is a good deal closer to modern ways of thinking than the state of affairs during the Middle Ages, when symptoms which we would certainly now regard as hysterical, such as stigmata and the dancing manias, were attributed to witchcraft and to the malign influence of possession by the devil. With The Enlightenment and the dawn of scientific medicine, the sexual etiology of hysteria, as well as the belief that it was caused by witchcraft, was rejected, and efforts to fit hysterical phenomena into the developing framework of medicine culminated in the work of Jean Charcot in the 19th century. In a sense, Charcot made hysteria respectable by lending the weight of his reputation to its investigation,³ and by supplying an acceptable organic etiology, hereditary degeneration of the brain.

It was at this juncture that Sigmund Freud stepped upon the scene. At first not questioning

Charcot's official theory, his own observations led him to the revolutionary notion that something very different was going on and that the cause of the bizarre phenomena he had witnessed at the Salpêtrière was not a pathologic process in the brain of the hysteric but rather an idea which the hysteric's conscious mind could not tolerate. This change in his views is adumbrated by a fascinating story which Freud himself tells, about how, at one of Charcot's evening receptions he overheard the great teacher describing a case of hysteria and saying in an animated and emphatic manner, "But in these cases it is always a sexual affair, always, always!"⁴

Freud's early formulation of hysterical symptoms was the relatively simple one that an idea or wish of a sexual nature was so unacceptable to an individual that it was repressed into the unconscious, while the charge of excitation associated with it became converted into a bodily symptom which was symbolically related to the idea. If the conversion were completely successful, all of the excitation was swallowed up in it so that the patient would appear to be inappropriately calm and even indifferent to his symptom, thus manifesting the famous *la belle indifférence* of the hysteric.

It is of interest that Freud, much of whose early theorizing was based on data accumulated from patients diagnosed as hysterical⁵ (although doubt recently has been cast on the diagnostic criteria in these cases⁶), at a certain point in his career became dissatisfied with his efforts to explain hysterical conversion⁷ and turned his attention elsewhere. The psychoanalytic and psychiatric worlds seem to have followed him so that for a considerable period after Freud's early work relatively few articles dealing with hysteria appeared in the psychoanalytic and psychiatric literature. However, recent years have seen a revival of interest in the subject with the result that psychoanalytic views have been revised, while other psychiatric contributions have suggested new and fresh ways of understanding hysteria, hysterics, and conversion reactions. I will

* Read before the Thirty-second Annual Scientific Assembly of the Medical Society of the District of Columbia in Washington, D. C., November 18, 1964.

now attempt to summarize the current status of psychiatric opinion on hysteria.

One development has been an attempt to clarify what we mean when we use "hysteria,"⁸ a label which has been so encrusted in various layers of meanings over the hundreds of years of its existence as to resemble today a fossil more than a living entity. Two main uses of the term have emerged from the current reappraisal, designating first, a particular kind of person, the hysterical personality, and second a particular kind of symptom, the conversion symptom or reaction, these 2 meanings overlapping but by no means coinciding.

What do we mean when we speak of someone as an hysterical personality or more simply as an hysteric? We are referring to the kind of person, much more often a woman than a man, who may present herself to the physician for any reason, since her personality does not protect her from cancer but whose complaints are likely to be multiple and to be described in vague and general terms. It will be difficult to pin her down to details because imprecision of language and an excessive use of generalizations and of extreme phrases are all hallmarks of this condition. In her manner, dress, appearance, and behavior she justifies the adjective histrionic, while a provocative, even seductive quality in her behavior makes her doctor aware of the fact that he is dealing with a woman. She is prone to emotional outbursts and excesses, but, after getting to know her, one may feel that there is a certain shallowness and absence of emotional depth and intensity behind her extravagant phrases and her emotional storms. There is a tendency to be drawn to her at first by her liveliness and by her apparent wish to be attractive, but this initial reaction may be quickly superseded by uneasiness and then by frustration and even hostility as the physician finds increasing difficulty in understanding her complaints or in forming a meaningful relationship with her.

The woman with an hysterical personality may have a conversion symptom as one of her initial complaints, but by no means always, and even less is it always true that a conversion reaction manifests itself only in individuals with hysterical personalities. A conversion symptom is one which occurs in structures innervated by the voluntary nervous system for which no organic cause can be found and should be differentiated from psychosomatic or psychophysiologic reactions, which are actual visceral diseases resulting from long-continued and excessive autonomic

stimulation occurring as a concomitant of chronic, unrelieved emotional tension.

The conversion symptom, by contrast, is not a disease process but rather represents the psychologic misuse of a body part.⁹ Like styles in clothing, human afflictions have a tendency to follow the tides of cultural change, and this certainly has been true of hysterical conversion reactions. Thus, in Charcot's day the eminent professors of neurology in Paris and Nancy could entertain their visitors by demonstrating the astonishing gyrations and saltations displayed by their "hysterical" patients, but at present, although hysteroepilepsy undoubtedly still exists, we no longer see such grotesque performances, which, indeed, may have been, to some extent, the product of the atmosphere of the institutions in which they took place.

Conversion reactions today are likely to be less spectacular, appearing in such forms as paralysis of a limb or limbs, involuntary movements, aphonia or dysphonia, blindness or deafness, sensory disturbances, disorders of gait such as astasia-abasia, or camptocormia. Certain painful conditions, particularly headaches, are also likely to represent conversion reactions. A recent article¹⁰ has revived the old term "hysterical psychosis" to refer to certain varieties of psychotic-like behavior. Symptoms such as these, far from being confined to the hysterical personality, may occur in the setting of any kind of personality disorder, being particularly likely to appear in immature and passive dependent personalities, as is evidenced by their frequency in situations in which compensation or some other obvious secondary gain is a factor of significance. Conversion reactions may also occur in individuals in whom schizophrenia is developing,¹¹ a fact which should serve as a warning to physicians who attempt by various heroic or dramatic measures to divest an individual of a conversion reaction at the risk of precipitating a much more serious mental illness. In general, conversion reactions should not be treated lightly. They represent a considerable emotional investment for the patient and are important for the maintenance of his psychic equilibrium. They are not always easily eradicated, and even when they are, the unconscious forces which underlie them may simply shift to crop up at another symptomatic level.

The statement has been made in recent psychiatric literature that conversion reactions are disappearing and various more or less speculative reasons for this phenomenon have been ad-

vanced.¹² However, I am inclined to believe that the evidence for such a disappearance is faulty and that what has been happening is that psychiatrists are less likely to see and to write about conversion reactions. The few systematic reviews available fail to show the purported decrease in incidence of such symptoms. For instance, a study at Johns Hopkins¹³ showed no appreciable difference in the admission rate of patients diagnosed as hysteria between a period from 1913 to 1920 and another period from 1945 to 1960. For various reasons having to do with the way psychiatry has developed and its relationship with other branches of medicine, these patients are more likely to be seen by the neurologist¹⁴ and general practitioner and are less likely to be referred to a psychiatrist. Thus, they often become diagnostic and management problems for physicians who are not trained primarily in psychiatry, and it therefore becomes important for these physicians to increase their understanding of the underlying causes and the clinical features of conversion reactions. Although this is not the place to discuss the ways in which a conversion reaction can be differentiated from an organic illness, I should like to mention that observation of present-day cases has resulted in the downgrading of the importance of *la belle indifférence* as a diagnostic criterion, and it is now known that a conversion reaction certainly may occur in an individual who is anxious and concerned about his condition as well as in one who displays an inappropriate calmness.

I shall turn now to a discussion of current views about the meaning and significance of the conversion symptom since it is only through such an understanding that the physician can be enabled to deal effectively and helpfully with his patient. One of the essential features of the hysterical conversion symptom, as the British psychiatrist, Ronald Fairbairn,¹⁵ states is "the substitution of a bodily state for a personal problem; and this substitution enables the personal problem as such to be ignored." But, important as this defensive purpose may be, defense is not the only function of the conversion device; there is also a vital communicative function¹⁶ both concealed and revealed by it. First, as a defense, hysterical conversion enables the individual to keep out of his awareness a need or a wish or a drive which is either consciously unacceptable to him or which is unattainable. Freud emphasized the sexual nature of the illicit impulse, and this is still important, especially, probably, when the kind of woman I have described as an hys-

terical personality also manifests conversion symptoms. However, not only sexual drives which need to be defended against are responsible for the conversion process. Today, in an age in which sexual inhibition has been loosened, there are other needs and impulses which for various reasons cannot be satisfied readily and which therefore are more likely to play the role that forbidden sexual feelings did in the 19th century. Especially important are hostile, destructive, aggressive drives,¹² and dependent impulses,¹⁷ experienced as a wish to be taken care of, to be nurtured, to find refuge from a competitive and impersonal environment. Since we all live in a world in which it is impracticable directly to punish those who frustrate us or to be cherished in the way which we all surely deserve, those of us who are not well equipped to deal with these problems in a more constructive manner sometimes defend ourselves against such impulses by the circuitous path of the conversion reaction.

As has been mentioned, a conversion reaction does not serve a defensive purpose only. It is also a communication whose message, of lust or helplessness or anger, has the peculiar virtue of being so disguised as not to expose its originator to possible retaliatory or contemptuous consequences. Thus, the conversion symptom does not, at all, occur in isolation; it is heavy with interpersonal meaning and its decipherment is a task to which the physician must turn himself if he is to understand his patient. He will be helped in doing this if for the time being he discards the physicochemical model of medicine in which he has been trained and thinks of the whole exchange between his patient and the people around him as a kind of game, like charades, in which a message is being communicated and must be decoded even though in this case, unlike charades, the performer himself is ignorant of what it is that he is trying to communicate.³

No discussion of hysterical conversion would be complete without at least an effort to deal with the problem of how we can tell that the individual who manifests it is not consciously simulating his disability, that is, is not malingering. I believe the notion, that many individuals whom we gullible psychiatrists call hysterics are really malingerers, stems not only from honest incredulity about the existence of unconscious mental functioning but also from the frustration and even resentment engendered in the physician by the failure of his usual methods of diagnosis and treatment in these cases. That there are indi-

viduals who deliberately feign blindness or deafness or inability to talk or loss of memory or paralysis of a limb is undoubtedly true, although I do not believe that their number is large. That there are other individuals, much more numerous, whose psychogenic bodily disabilities are quite outside of their conscious control also admits of no reasonable doubt, as can be attested to by anyone who has witnessed the lack of reaction to pin prick of a patient with hysterical analgesia. However, rather than take the position that we are dealing only with a state of awareness which is either totally present or totally absent, careful observation suggests instead the existence of a continuum of levels of awareness, with the patient being more or less conscious of his problem and its solution, and with most patients with a conversion symptom falling toward the end of the scale in which conscious awareness is lesser rather than greater.

I should like to conclude by briefly describing a recent neurophysiologic observation which is of considerable interest in relation to our subject and which is also pertinent to the aspect of it which has just been discussed. In a case of hysterical hemianesthesia, Hernández-Péon and his collaborators¹⁸ were able to demonstrate a diminution of electrical response in the cortex contralateral to the anesthetic side when the skin of this side was stimulated by pin prick, as compared to the response obtained in the cortex contralateral to the normal side. They believe that afferent sensory nervous impulses are much more under the control of central mechanisms than has been thought previously, and they suggest that a central inhibitory effect on the sensory pathways involved in the hysterical anesthesia may account for the diminution of sensation. At any rate, the findings of a measurable change in brain physiology, if they are confirmed, may serve to convince those of skeptical mind that people who have been impelled by inner neces-

sity to deal with an emotional problem by developing conversion reactions are not simply being deceitful. Of more general and greater importance is the possibility that experiments of this kind may open an exciting pathway for research which will help us in the future to find the answer to the ancient puzzle of what has been called "the mysterious leap from the mind to the body."¹⁹

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Use and Abuse of Psychoeffective Drugs*

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As "PSYCHOEFFECTIVE," "psychoactive," or "psychotropic" we designate all those drugs which have direct effect on a person's behavior, his activity level, and his mood. Psychoeffective drugs first became available in the early 50's and have profoundly changed the management of the mentally ill throughout the civilized world. Many a patient who formerly would have needed hospitalization can now be treated as an outpatient. For others the period of hospitalization can be shortened or made less traumatic and disagreeable for the patient, his family, and hospital personnel.

So far there is no precise answer to the questions as to how and where in the body these drugs act. Obviously, drugs influence biologic systems, and from present knowledge it can be assumed that, partially at least, subcortical structures such as the basal ganglia and the limbic system are involved. There is also evidence that the crucial biochemical actions take place at the synaptic level, involving changes in the utilization and metabolism of biogenic amines, such as serotonin, norepinephrine, and acetylcholine. Thus, many psychoeffective drugs alter the amount of brain serotonin at the same time that they alleviate mental symptoms.¹ However, the uncertainty in this area is highlighted by the fact that there is not even agreement on the exact nature and mode of functioning of the synaptic transmitter substances in normal biologic processes. The clinician has great difficulty in assessing what these drugs do and how they do what they do. Research in this area is compounded by the many variables one cannot possibly control. Hopefully, the drug will bring about a balance of integration of the human organism, but the effect depends largely on the nature of that balance. Thus, the same drug at the same dosage level can provide tranquility in one patient and panic in another.²

The therapeutic effects of the drugs have also been characterized as a harmonization of per-

sonality due to attenuation of impulsivity and reduction of pathologic drives and ideational productivity.³ In many instances we gain the impression that the drug breaks up a vicious circle between tension and stimulus, thus facilitating a return to normal self-regulation and homeostasis.

However this may be, one central issue has become quite clear. The psychoeffective drugs as we know them today are not disease-specific. At best they are symptom or syndrome-specific, and in our endeavors to define their clinical indications we have to focus our attention on what have been called their target symptoms (Freyhan^{4, 5, 6}). Target symptoms are not identical with clinical entities but are characterized by such phenomena as hyper- or hypoactivity and depressed or elated mood. Yet, defining the target symptoms for a particular drug is not the entire answer to the problem of indications for drug treatment. In order to formulate a comprehensive treatment plan we also need a diagnosis and with it certain concepts regarding prognosis. In my opinion this remains an important issue, on which I have written elsewhere.⁷

In concluding these general remarks a few words should be said about combining drug therapy with other therapeutic modalities. Unless one does clinical research and needs to hold down the number of variables drug therapy can readily be combined with other forms of somatic treatment, such as electroshock, insulin coma, and subcoma therapy, and with psychotherapy. It should go without saying that the prescribing of drugs does not alter the importance of the physician talking to his patient. Psychotherapy in one form or another should always accompany somatic therapy, the two supplementing each other almost invariably in the psychoses and frequently in other emotional conditions.

The psychoeffective drugs can be classified as follows:

A. Psycholeptics

1. Hypnotics (such as morphine)
2. Neuroleptics (phenothiazines, Rauwolfia)
3. Tranquilizers (such as meprobamate)

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- B. Psycho-analeptica (antidepressants)
 - 1. Tofranil® and Elavil®
 - 2. The monoamino-oxidase inhibitors (such as Niamid®)
 - 3. Stimulants (such as Dexedrine®)
- C. Psychodysleptica (or phantastica)
 - 1. LSD-25
 - 2. Mescaline
 - 3. Psilocybine
 - 4. Certain tryptamines

The Neuroleptics (Phenothiazines)

Presently the most important neuroleptics are the phenothiazines. Chemically, their common component is the phenothiazine nucleus, individual chemical and clinical differences being produced by substitution of halogens and of various side-chains. Originally phenothiazine had been used as an anthelmintic and is still known as such in German veterinarian medicine. One of the first clinically used derivatives was Phen-ergan®, an antihistaminic. Finally, in 1952 Delay and Deniker in Paris discovered the psychiatric usefulness of chlorpromazine (Thorazine®), the parent phenothiazine to all later derivatives.

Pharmacologically the phenothiazines depress central and sympathetic nervous system activity; exert atropine-like and antihistaminic action; produce sedation and at high dosage hypnosis and anesthesia; and potentiate other drugs with these specific qualities. They also block conditioned reflexes and some possess antiemetic and antipruritic properties.¹ Clinically the chief asset of these drugs is that with proper dosage they induce sedation without sleepiness. Thus, the overactive patient can be calmed down without impairing his emotional and intellectual alertness. Alertness as a matter of fact can be much improved, probably due to the reduction of interfering restlessness, overstimulation, and by suppressing the emergence of simultaneous but opposing impulses.

Today most clinicians will probably agree that the phenothiazines do not have a direct effect on thinking, delusions, and hallucinations. If in psychotic patients these psychopathologic phenomena are improved under phenothiazine medication, this is most likely due to reduction of tension, anxiety, and pathologic overalertness.

Indications and Target Symptoms. Indications or target symptoms are all stages of somatic and emotional excitement and restlessness, and of anger, hostility and aggressiveness. Such conditions, as seen in manic attacks, catatonia or acute or chronic brain syndromes, respond within half an hour to an adequate dosage of a potent pheno-

thiazine. Further, states of inner tension and anxiety, expressed in stiff, rigid and frozen attitudes, often combined with paranoid ideation, respond well to these drugs. Here, for instance, we think of the tense, catatonic and mute patient who refuses to eat, the paranoid who feels caught by his persecutors, or the patient with a severe anxiety neurosis. Usually chronic conditions with marked motor overactivity, such as hebephrenia and some senile and other brain syndromes, respond favorably to moderate doses of neuroleptics.

Neuroleptics and tranquilizers as we know them today are not indicated in depressions. They may seriously deepen the depressed state and possibly precipitate suicide. Only in agitated depressions can it be an advantage to combine a mild neuroleptic such as Mellaril® with an antidepressive drug.

The Different Phenothiazines. The next important problem is: Which drug for which syndrome? All phenothiazines have certain effects on the extrapyramidal system, and in sufficiently high dosage all of the useful drugs produce a Parkinson-like effect. However, at lower dosage levels they differ one from another inasmuch as some produce a hypokinetic syndrome, characterized by akinesia and somnolence, while others bring about a hyperkinetic syndrome, manifested by akathisia and dyskinesia. These effects can be used for a clinical classification (Freyhan), and we may propose to use drugs of the first type for syndromes in which motor restlessness, agitation and acting out are prominent, and drugs of the second order in syndromes in which rigidity and underproductivity are prominent. Some of the drugs which produce the hypokinetic syndrome are chlorpromazine (Thorazine), thioridazine (Mellaril), and promazine (Sparine®). Some of the drugs that produce a hyperkinetic syndrome are prochlorperazine (Compazine®), perphenazine (Trilafon®), trifluoperazine (Stelazine®), and fluphenazine (Prolixin®). Drugs which are somewhat in the middle of the 2 main groups are triflupromazine (Vesprin®) and reserpine or Serpasil®. Potency and with it the parksonian effect increase steadily from the lowest, which is Sparine, to the highest, Prolixin, in the order indicated.

This may be a somewhat arbitrary classification, and some studies have questioned its validity, showing that on a large scale there may not be too much difference between most of the phenothiazines. For practical purposes it may be best to know well 2 or 3 of the drugs in each group and to use them judiciously. There is, I

believe, little value in substituting one drug for another of similar structure and strength, although one may want to exchange a weak one for a potent one or vice versa. Of all the available neuroleptics, chlorpromazine (Thorazine) may still be the one with the broadest spectrum of clinical applicability. However, we must always remain aware of the fact that for some as yet unknown reasons different patients react differently to the same drug and the same patient may react to the same drug differently at different times.

Dosage. The dosage range in which these drugs can and must be prescribed is very great. Whereas an anxious, restless, neurotic patient may feel sleepy, drowsy, and unable to function on 25 mg. of Thorazine twice a day, a grossly disturbed manic patient may need as much as 1,000 mg. of Thorazine or more a day. In office practice it is advisable to start with very low dosages and increase them gradually. Many of the subjectively disagreeable side-effects occur only in the beginning of treatment, and if they are too pronounced some patients tend to reject the medication. However, if one is confronted with an unmanageable psychotic patient nothing short of 100 mg. of Thorazine intramuscularly may be of any help. Occasionally we encounter rather paradoxical reactions. On very low dosages of Mellaril, for example, some patients become very restless, giddy, and wide awake. This may be explained by the fact that at low dosage many of the phenothiazines exert a euphorizing or stimulating effect before the sedative action sets in. Most of the phenothiazines need not be given more often than twice a day, some 3 times daily (Thorazine). There has been an increasing tendency to prescribe combinations of different neuroleptics. However, the merit of this practice is difficult to evaluate. Instead of producing special effects at special times, such as less tiredness in the morning than in the evening, by combining different phenothiazines one could first try to reach such goals by individualizing dosages.

Side-effects and Dangers. Neuroleptics and tranquilizers are being given to a large number of patients, and some of them might be better off without them. It would be a serious misconception to think that these drugs are altogether harmless. They cause immediate and long-range side-effects. The most frequently encountered ones are the following: immediate side-effects: dryness of mouth, fine tremor, dizziness, and orthostatic hypotension; long-range effects: blood dyscrasias, particularly severe leukopenia,

liver damage, melanin deposits in the skin and cornea, and in women lactation and cessation of menses. Mellaril in addition sometimes causes temporary difficulties in ejaculation. Equanil® or Miltown® may be habit-forming and cause epileptic seizures upon withdrawal. For these reasons it is always advisable to order at least a blood count and a liver function test prior to beginning drug therapy and every 3 months during treatment.

The question as to how long drug treatment should be continued is difficult to answer. It involves many thorny issues on which there is no general agreement. Many psychiatric ailments are phasic; others are continuous but with waxing and waning psychopathology. Once a patient has improved on a drug will he remain well after withdrawal of the drug? Can continued drug treatment prevent later relapses? And if this were so, shall one take the risk, the cost, and the impediment involved in continuous drug treatment? These are but a few of the issues. Only intimate knowledge of the individual case can serve as a guideline. In principle one should always give as little as possible but as much as needed for as short a time as possible. Surely many patients remain on these drugs much longer than they need to. There is only one way of finding out whether or not a patient is still in need of a drug and that is by taking him off the drug. If one does this rather arbitrarily on a large scale on a psychiatric ward, for example, one may well find that half of the patients show no change in their psychopathology; one-fourth deteriorates and another fourth improves after discontinuation of the drug.

Psychoanaleptics or Antidepressive Drugs

Under these terms we group drugs which have a presumably central stimulating effect on patients suffering from depression. Whereas amphetamines may provide temporary relief lasting as long as the drug is being taken the true psychoanaleptics seem to be more syndrome-specific and frequently curative in their action. In this respect it is interesting to note that whereas Dexedrine has a stimulating effect in normal non-depressed subjects the psychoanaleptics have none.

At this time 2 main groups of psychoanaleptics are commercially available. In the first group we find imipramine (Tofrānil) and amitriptyline (Elavil), which are offsprings of the phenothiazines. In Tofrānil the S atom of the middle ring

has been replaced by CH_2 groups with the result that the axis of the molecule becomes bent or twisted. It has been postulated that this is one of the prerequisites for producing tricyclic compounds with antidepressive features. The second group is made up of the mono-amino-oxidase inhibitors which were developed after it had become apparent that isoniazid, their parent compound, which was used in the treatment of tuberculosis, had a euphoriant effect on the patient. All of these drugs increase the serotonin level in the brain, but they do this in different ways.

Indications and Target Symptoms. Obviously, the indications and target symptoms for these drugs are depressive states. However, of the different types of depression some patients respond much better to drugs than others. Much has been said and written about the fundamental difference between the so-called endogenous and the reactive depressions, the first being caused by as yet unknown metabolic changes and the second by emotional distress. From this it was postulated that endogenous depressions respond to and ought to be treated with somatic therapies (electroshock or drugs) whereas the reactive depressions which do not respond to somatic treatment should be treated by psychotherapy. Although I believe this to be true in principle, it is often very difficult to clearly separate the 2 types of depressions in practice. In many instances psychologic stress triggers endogenous depressive psychoses, and on close scrutiny one may frequently find endogenous elements in what appears at first sight as a typical reactive depression. Thus, the diagnosis alone is insufficient to determine therapy and predict its outcome. A better criterion may be the presence or absence of what German authors have called signs of "vital depression," characterized by fatigue, sensation of pressure, slowing of thinking and decision-making, and inability to enjoy oneself. Common to all these symptoms are the diurnal changes in which the depressive symptoms are more pronounced in the morning than in the evening. It appears that depressive states in which such signs and symptoms can be elicited are more responsive to drug treatment than those which are free of them or manifest them only to a very slight degree.⁸

Partially in agreement and partially at variance with these criteria, statistics show that best results with drug therapy are obtained in the involutional depressions and depressions associated with cerebral arteriosclerosis and other

physical ailments. Next in responsiveness are the depressed phases of manic-depressive disease. Least responsive are the neurotic or reactive depressions. The chronic hypochondriacal depressions, in which the patient's continuous complaints about the slightest side-effects make proper drug dosage impossible, respond very poorly.

Depressive states with admixtures of schizophrenic elements and schizophrenic reactions of the schizo-affective type are singularly unresponsive to treatment with most of the presently available drugs. However, it can be expected that eventually psychopharmacologic research will find appropriate drugs for these conditions. A drug such as the thioxanthene derivative, Taractan[®], may represent a step in this direction.

Preference for one or the other of the antidepressive drugs may largely be a matter of individual experience. However, to me it would seem that Tofranil is the most reliable antidepressant. Elavil, although chemically almost identical with Tofranil, may have more of a sedative action and is preferred by some in the treatment of agitated depressions.

Side-effects. Side-effects with antidepressive drugs are frequent and numerous. They usually occur in the beginning of therapy and abate after about a week. With Tofranil almost invariably one will encounter dryness of the mouth, fine tremor, jitteriness, excessive perspiration, dizziness, difficulties in accommodation, and occasionally orthostatic hypotension. Similar effects are produced by the mono-amino-oxidase inhibitors, and in addition they may confront us with sudden hypertensive crises, as has been seen particularly in Parnate[®] (tranylepromine). Blood dyscrasias (leukopenia) and occasional liver damage have been observed in most of the antidepressants. Great care must be exercised if one wants to shift from the mono-amino-oxidase inhibitors to drugs such as Tofranil or Elavil and vice versa. A 2-week drug-free period is recommended.

Dosage. In the administration of antidepressive drugs it is best to follow the instructions given by the pharmaceutical companies. If time and psychopathology permit, initial low dosage, such as 25 mg. of Tofranil t.i.d., will minimize the emergence of bothersome side-effects. However, it is important to reach maximal levels quickly, such as Tofranil, 75 to 100 mg. t.i.d., and to maintain this level until the depressive symptoms begin to abate. At this time the dosage may be reduced slightly, for example, to Tofranil 50 to 75 mg. t.i.d. Finally, it is advisable to maintain

this dosage level for at least 2 weeks after all depressive symptoms have disappeared and then to attempt a slow reduction and finally discontinuation of the drug. If in a given patient the "normal" length of his depressive phases is known from the history, one might do well to keep him on a maintenance level of the drug for the assumed length of the depression, even if he is entirely well. If the depressive symptoms are severe, intramuscular administration of the drug is preferable whenever possible (Tofranil and Elavil), at least for the first week of treatment. This, of course, is equally true for the neuroleptics.

In depressions with marked anxiety and restlessness the addition of a mild nondepressant phenothiazine, such as Mellaril, at dosage levels of 10–25 mg. t.i.d., may be very advantageous. At higher dosage (100 mg.) this drug may also be used at bedtime to assure good sleep. Sound sleep at night is a most important issue in the treatment of mental diseases in general and of depressions in particular, and in this respect the older drugs such as chloral hydrate or the barbiturates can readily be combined with psychoeffective drugs.

Results. Although the results of therapy in psychiatry are difficult to evaluate, it can be said with some assurance that psychoeffective drugs are indeed effective and have considerably enriched the therapeutic tools of the psychiatrist. Results, of course, depend on how we define indications of therapy and the goals we expect. If we think in terms of a cure for the schizophrenic patient, drugs are apt to disappoint us; but if we are content with functional rehabilitation we may be greatly rewarded. In psychotic depressions complete remission can be expected in approximately 50 to 60 per cent of all patients treated with drugs, whereas with electroshock we can count on about 80 per cent remissions.

Summary

In summarizing I will merely emphasize some of the "do's" and "don't's" of chemotherapy in psychiatry:

Psychoeffective drugs are not disease-specific,

and we must know our target symptoms and define a treatment plan.

Neuroleptics should not be used in depressions except in very small doses as adjuvants to antidepressants.

We should avoid using the potent phenothiazines in nonpsychotic patients and not give drugs like Stelazine to agitated ones.

We must remain alert with respect to the dangers of these drugs and carefully watch for side-effects, particularly leukopenia.

Neuroleptics potentiate the hypnotic effects of anesthetics. This is something to remember if and when patients on drugs need surgical intervention.

It is prudent to avoid a combination of phenothiazine therapy and modified electroshock treatment. The cumulative effects of a phenothiazine and a barbiturate plus the muscle relaxant may cause serious trouble.

However, in spite of all the risks and complications, it remains true, in my opinion, that the successes of modern psychiatry would be unthinkable without chemotherapy.

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Psychiatric Admissions to a Municipal General Hospital

A Comparison of Admissions Selected by the Psychiatric Staff versus Admissions by Nonmedical Personnel (Police) at District of Columbia General Hospital, Washington

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THE PRIMARY PURPOSE of this paper is to evaluate the police mental observation admissions to the psychiatric division of a municipal general hospital. So that a comparative evaluation could be done it was decided to compare the police mental observation admissions to the psychiatric staff admissions. Thus one could compare those patients screened by the psychiatric staff and thought to be in need of hospitalization with those patients screened by nonmedical personnel (the D. C. Metropolitan Police Department) and thought to be in need of hospitalization.

For the first group of admissions all patients admitted by the hospital medical officers or the psychiatric residents were included. For the second group all patients admitted by the D. C. Metropolitan Police Department on a charge of mental observation (MO) were included.

Method

The psychiatric admissions to D. C. General Hospital during the fiscal year July 1, 1962-June 30, 1963 were evaluated. During this period there were 4,343 admissions to the Division of Psychiatry. Of these admissions, 1,105 were admitted by the D. C. Police Department on a charge of mental observation (police MO), and 1,216 were admitted by the psychiatric staff for voluntary mental observation (voluntary MO). Not included in this study were the 2,022 other psychiatric admissions: voluntary alcoholic admissions, juvenile admissions, Municipal and District Court commitments, interstate transfers, and admissions on certificate and affidavits. A summary of the admission statistics is shown in table 1.

It was determined that a random sample consisting of every tenth admission in each of 4 categories, male police MO, female police MO, male voluntary MO, and female voluntary MO, would produce statistically accurate data. Since the total police and voluntary admissions were 2,321, the final random sample consisted of 232 patients. The medical records of these 232 patient-admissions were reviewed. The following data were abstracted: age, sex, race, date of admission, date of discharge, discharge diagnosis, and final disposition.

TABLE 1: Admission Statistics

CATEGORY	NUMBER OF ADMISSIONS	PER CENT OF TOTAL ADMISSIONS
Total	4,343	—
Male	2,654	61.1
Female	1,689	38.9
Police MO	1,105	25.4
Male	522	13.5
Female	583	12.0
Voluntary MO	1,216	28.0
Male	523	12.0
Female	693	15.9

Results

The police MO admissions represented 25.4 per cent of the total admissions and the voluntary MO admissions represented 28.0 per cent of the total admissions. Therefore, the 2 admission groups evaluated in this study represented 53.4 per cent of the total admissions.

In the total admission population 61.1 per cent were males and 38.9 per cent were females. However, in both admission groups evaluated there were more female than male admissions; female admissions represented 52.8 per cent of the police

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MO group and 57.0 per cent of the voluntary MO group (table 2). The median age for voluntary

TABLE 2: Sex Distribution

CATEGORY	PER CENT OF TOTAL ADMISSIONS	PER CENT WITHIN THE SUBGROUP
Police MO	25.4	—
Male	13.5	47.2
Female	12.0	52.8
Voluntary MO	28.0	—
Male	12.0	43.0
Female	15.9	57.0

MO admissions was 35 years; the median age for police MO admissions was 33 years (table 3).

TABLE 3: Age, Race and Length of Hospitalization

CATEGORY	RACE		MEDIAN AGE (Years)	MEDIAN HOSPITAL STAY (Days)
	PER CENT CAUCASIAN	PER CENT NEGRO		
Police MO	45.1	54.9	33	6
Male	38.5	61.5	36	9
Female	51.8	48.2	31	4
Voluntary MO	41.1	58.9	35	13
Male	44.7	55.3	34	13
Female	37.5	62.5	36	13

Within both admission groups the per cent of Negro admissions was higher than the per cent of Caucasian admissions; 54.9 per cent of the police MO and 58.9 per cent of the voluntary MO admissions were Negro. There were no admissions of Orientals in the records reviewed.

The voluntary MO admissions stayed in the hospital longer than the police MO admissions. The median stay for voluntary MO admissions was 13 days, and the median stay for police MO admissions was 6 days.

On final disposition 63.5 per cent of all police MO and 67.7 per cent of all voluntary MO admissions were discharged to self or to family, while 30.8 per cent of all police MO and 23.8 per cent of all voluntary MO admissions were committed to St. Elizabeths Hospital for further care. The remaining patients were either transferred to a private psychiatric facility for further care or were sent to court (table 4).

For the purpose of this paper the discharge diagnoses were categorized into 6 groups:

1. *Psychotic group.* This group included schizophrenia, manic-depressive psychosis, and acute psychotic reaction, type undetermined.

2. *Personality and character disorder group.* There were 18 different diagnoses included in this group: immature personality, transient situ-

ational reaction of adulthood, transient situational reaction of adolescence, hysterical character, hysterical personality, anxiety reaction, paranoid personality, inadequate personality, gross stress reaction, suicide gesture, narcotic addiction, depression, passive-dependent personality, passive-aggressive personality, schizoid personality, dissociative reaction, sexual deviant, and sociopathic personality.

TABLE 4: Final Disposition

CATEGORY	PER CENT TO SELF OR TO FAMILY	PER CENT TO SAINT ELIZABETHS	PER CENT TO OTHER
Police MO	63.5	30.8	5.7
Male	51.9	38.5	9.6
Female	75.0	23.2	1.8
Voluntary MO	67.7	23.8	8.5
Male	61.8	21.3	16.9
Female	73.8	26.2	0.0

3. *Acute brain syndrome secondary to alcohol.* Three types were found: intoxication, delirium tremens, and alcoholic hallucinosis.

4. *Chronic brain syndrome.* Many medical records did not specify an etiology; therefore, no specific categories could be evaluated. The 3 etiologic types most frequently found were arteriosclerotic cardiovascular disease, alcoholism, and syphilis.

5. *Mental retardation.* No specific etiologic types were noted.

6. *Miscellaneous nonpsychiatric.* This group consisted of patients admitted for psychiatric illnesses who were transferred to medicine or to surgery within 24 hours of admission. Each of these patients died shortly after this transfer.

There were more psychotic, chronic brain syndrome, and miscellaneous nonpsychiatric admissions noted in the voluntary MO admission group, whereas there were more personality and character disorders, acute brain syndrome secondary to alcohol, and mental retardation admissions noted in the police MO admission group (table 5).

TABLE 5: Discharge Diagnosis

CATEGORY	PER CENT PSYCHOTIC	PER CENT PERSONALITY AND CHARACTER	PER CENT ABS 2° ALCOHOL	PER CENT CBS	PER CENT MENTAL RETARDATION	PER CENT MISC. NON-PSYCHIATRIC
Police MO	37.3	34.6	15.0	8.4	2.8	1.9
Male	44.2	19.2	19.2	9.6	3.9	3.9
Female	30.4	50.0	10.7	7.1	1.8	0.0
Voluntary MO	46.9	23.2	8.8	17.5	0.4	3.2
Male	48.5	10.6	8.1	25.5	0.9	6.4
Female	45.3	35.9	9.4	9.4	0.0	0.0

Personality and character disorders. It was noted that 18 different diagnoses were included in this group. It was thought that this large a number of diagnoses might be due to the number of patients admitted for making a suicide gesture within this admission group. The "Diagnostic and Statistical Manual of Mental Disorders" of the American Psychiatric Association does not list suicide gesture as a diagnosis. Therefore, in deciding a discharge diagnosis on patients with the presenting symptom of suicide gesture one has to select that diagnosis which best fits the underlying personality. To check this possibility the medical records of those patients with a diagnosis in this category were again reviewed to determine how many of these patients were admitted primarily because of a suicide gesture. It was noted that 72.0 per cent of the police MO and 19.6 per cent of the voluntary MO admissions were suicide gestures (table 6).

TABLE 6: Per cent Suicide Gesture in the Personality and Character Disorder Group

CATEGORY	SUICIDE GESTURE	NONSUICIDE GESTURE
Police MO	72.0	28.0
Male	60.0	40.0
Female	82.1	17.9
Voluntary MO	19.6	80.4
Male	0.0	100.0
Female	39.1	60.9

Observations and Discussion

During the year evaluated in this study there were 2.6 per cent more patients admitted by the psychiatric staff than by the nonmedical personnel. The 2 categories of admissions studied represented 53.4 per cent of the total psychiatric admissions. Although specific records were not reviewed, it is thought that the majority of the remainder 46.6 per cent were voluntary alcoholic admissions.

Contrary to the pattern with total psychiatric admissions it was found that with both admission groups evaluated there were more female than male admissions. The probable explanation of this difference is that the majority of the patients not included in this study were male voluntary alcoholic admissions.

Because of the wide scatter of ages it was decided to compare the median age rather than the average age of each group. The median age for voluntary MO was 35 years, for police MO 33 years. The greatest difference was noted with the police MO group in which the median age for males was 36 and for females 31. This difference

might be explained by the increased number of female patients who made a suicide gesture and were admitted on police MO. A review of the records showed that 54.8 per cent of all female police MO admissions had made a suicide gesture and that the median age for these patients was 27 years. These statistics appear to indicate that the younger median age for female police MO admissions is due to the increased number of patients admitted in this group for suicide gestures.

The exception to the trend of more Negro than Caucasian admissions was in the subgroup female police MO. In reviewing the records for this subgroup it became apparent that the reason for this difference was that more female patients admitted for making a suicide gesture were Caucasian than Negro. The records showed that 65.3 per cent of all female police MO admissions for suicide gesture were Caucasian as compared to 34.7 per cent Negro. To look at this observation from a different point, 51.7 per cent of all Caucasian police MO admissions had made a suicide gesture as compared to 29.6 per cent of the Negro police MO admissions. The general pattern of more Negro than Caucasian admissions to psychiatry probably only reflects the population distribution in Washington, D. C. At the time of this study, 58 to 60 per cent of the population of Washington, D. C. was Negro.

The median length of hospitalization for voluntary MO admissions was greater than the median stay for police MO admissions. One explanation for the median stay of 6 days for police MO is the fact that all patients admitted on the charge of mental observation are scheduled to meet the Mental Health Commission. There is usually a 7- to 10-day wait for the Mental Health Commission hearings, and, unless commitment is indicated, the psychiatric staff attempts to make a discharge disposition before the hearings.

Over 2/3 of the admissions in each of the admission groups evaluated were discharged to self or to family. It was noted that within each admission group more female than male patients were discharged to self or to family. This difference is most noticeable in the police MO group in which 75.0 per cent of the female admissions were discharged to self or to family. This observation is explained again by the increased number of suicide-gesture admissions in the subgroup female police MO, in which 54.8 per cent of all female police MO admissions had made a suicide gesture. Of all female police MO patients discharged to self or to family, 54.8 per cent were in

the category of personality and character disorder and had made a suicide gesture. The remaining female police MO patients discharged to self or to family were distributed as follows: acute brain syndrome, alcohol—14.3 per cent; psychosis—16.6 per cent; chronic brain syndrome—4.8 per cent; personality and character disorder without suicide gesture—7.1 per cent; and mental retardation—2.4 per cent. It is more difficult to explain the increased number of female patients discharged to self or to family within the voluntary MO group. The distribution of patients in this group discharged to self or to family was: personality and character disorder with suicide gesture—19.2 per cent; acute brain syndrome, alcohol—12.7 per cent; psychosis—36.2 per cent; chronic brain syndrome—4.2 per cent; and personality and character disorder without suicide gesture—27.7 per cent.

There were more psychotic, chronic brain syndrome, and miscellaneous nonpsychiatric admissions in the voluntary MO group; and there were more personality and character disorders, acute brain syndrome secondary to alcohol, and mental retardation admissions in the police MO group. It is thought that the main explanation for this distribution is the difference in criteria used by the 2 admission groups in determining hospitalization. For a member of the D. C. Metropolitan Police Department to admit someone on a charge of mental observation, the individual must be shown to be potentially harmful to himself or to others; there is no other admitting criterion. Implied in this fact is that the individual must come to the attention of the police officer (i.e., must in some way "act out"). This 1 criterion for admission is reflected in the observation that more patients admitted on a charge of mental observation by the Police Department were in the categories of personality and character disorders (72.0 per cent of whom made suicide gestures) and acute brain syndrome secondary to alcohol (intoxication, delirium tremens, acute hallucinosis). The psychiatric staff uses many criteria for admission: (1) Is patient potentially harmful to himself or to others; (2) can patient be adequately cared for by the family; (3) does one wish to encourage regression by hospitalization or would patient be better treated in an outpatient setting; (4) does patient have apperception of his illness and is he motivated for therapy; and (5) in elective admissions, is the patient a potentially interesting teaching case? Therefore, the criteria for admission by the psychiatric staff suggest that this admitting group is looking for

patients who have symptoms which are egodystonic either to the patient or to the family. These criteria are reflected in the observation that more patients admitted for voluntary mental observation were in the categories psychosis and chronic brain syndrome.

The suicide-gesture admission presented an interesting problem. In the series of patients reviewed for this investigation there were many different diagnoses used. The reason for the varied diagnoses is that "suicide gesture" is considered a symptom; therefore, the psychiatric staff had to select a diagnosis from the "Diagnostic and Statistical Manual of Mental Disorders" which best described the underlying personality. Because of the short hospitalization and the lack of coöperation frequently found with this group of patients an accurate evaluation of the underlying personality is difficult. Since the current diagnostic system does not include suicide gesture, a statistical evaluation of the discharge diagnosis of a series of patients can be misleading. Perhaps what is needed is to include "suicide gesture" in the list of supplementary terms and to have a specific suffix-code designation listed to be used with the primary diagnostic code.

The psychiatric staff admitted more patients who were transferred to a medical or to a surgical service within 24 hours of admission. Each of the patients transferred died shortly after arriving on the medical or surgical service; 3.2 per cent of the voluntary MO and 1.9 per cent of the police MO admissions were in this category. (Using chi square, this difference proves to be a statistically significant difference.)

The majority of patients presented to this municipal general hospital had presenting symptoms which were basically egosyntonic to the individual. Because D. C. General Hospital serves both as a community hospital and as a psychiatric teaching hospital, the patient most likely to be placed in a treatment program rather than a "disposition program" is one who has apperception and motivation, that is, the patient with at least some egodystonic symptoms. Therefore, it appears that the community's needs and the community-teaching hospital's needs are different. The result is that the vast majority of patients entering this community hospital are offered brief supportive therapy and/or disposition and that few patients remain for a form of longer psychotherapy. This difference in needs does not show up in the amount and type of total psychiatric admissions. However, this difference does

show up in the type of admissions selected by the nonmedical personnel as compared to the type of admissions selected by the psychiatric staff. This difference also appears to show up in the type of patients who are selected for long-term therapy at the community-teaching hospital.

Conclusions

Patients admitted to D. C. General Hospital during the year evaluated by the psychiatric staff were noted to be older, to remain in the hospital longer, and to be more likely discharged to self or to family than patients admitted by nonmedical personnel. There were more psychotic, chronic brain syndrome, and miscellaneous nonpsychiatric admissions in the group of patients admitted by the psychiatric staff.

Patients admitted to D. C. General Hospital during the year evaluated by nonmedical personnel (police) were noted to be younger, to remain in the hospital for a shorter time, and to be more likely committed to another hospital for further care. There were more personality and character disorders, acute brain syndrome secondary to alcohol, and mental retardation admissions in the group of patients admitted by nonmedical personnel.

Although there was some variation in specific categories, in general the patients admitted by nonmedical personnel were as much in need of hospitalization as were patients admitted by the psychiatric staff. The psychiatric staff was more likely to admit a patient who in retrospect should have been admitted to medicine or to surgery. The admission judgment of the nonmedical personnel appears to be as accurate as the admission judgment of the psychiatric staff.

Summary

A comparative study was made between the police mental observation and the psychiatric staff (voluntary) mental observation admissions to D. C. General Hospital during the fiscal year

July 1, 1962-June 30, 1963. A statistical evaluation of these 2 groups of admissions was done with specific attention to age, sex, race, length of hospitalization, discharge diagnosis, and final disposition. A psychiatric-sociologic approach was used in an attempt to explain the observations noted.

Fluctuation in Schizophrenic Behavior—Reynolds

(Continued from page 532)

amined for relation to gross environmental change and evidence of internal regulating agencies.

While no predictive model can as yet be devised, simple methods of data reduction suggest the presence of homeostatic defects in the regulation of behavior, that is, an inability to stabilize behavioral rates except at very low or rigidly specified levels of environmental engagement.

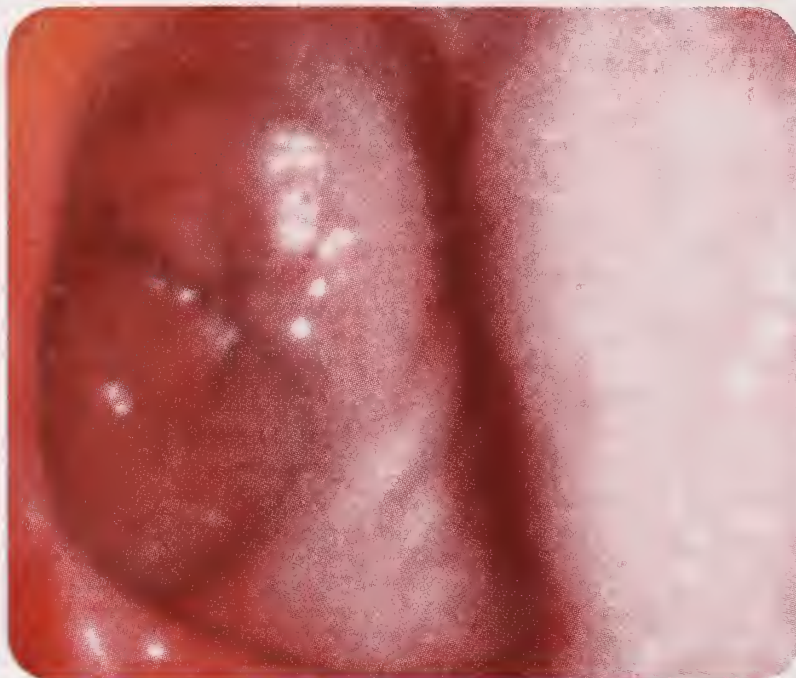
Validity of this hypothesis can be explored by further work extending the methods already used.

A general biologic point of view attaching the concept of homeostasis to observed patterns and rates of behavior without regard for unobserved mechanism is suggested as a feasible, methodological position for the scientific study of human behavior.

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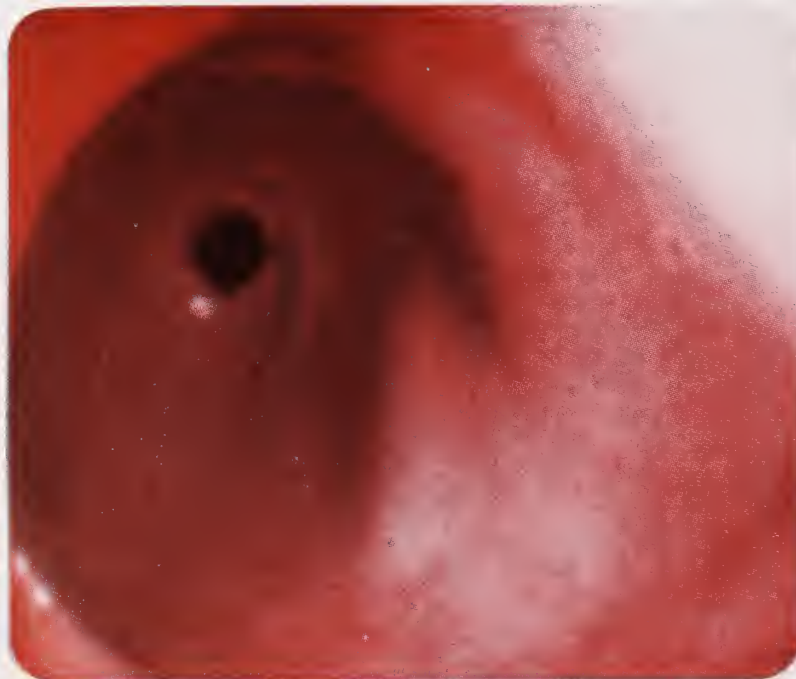
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Intragastric photography studies¹



A/ E. B., male, age 48. Normal antral contraction. Pyloric opening is not seen. It is difficult to differentiate a deep prepyloric contraction from a "pyloric fleurette" or true pylorus.

B/ Same subject after 6 mg. of propantheline bromide intravenously; antral contractions ceased. The pyloric orifice remained open and was easily identified. Better visualization of the antrum was also obtained.



Now you can see Pro-Banthine[®] at work (propantheline bromide)

Pro-Banthine is so effective in anticholinergic action that it may be employed in visualizing the entire pyloric region.

In addition to the intragastric photographs, cinegastroscopic studies² have demonstrated graphically not only its effectiveness but the superiority of Pro-Banthine over belladonna alkaloids.

Pro-Banthine produced complete cessation of gastric, antral and pyloric motor activity with a dose of 6 mg. intravenously. This is approximately one-third the usual oral dose of 15 mg.

Atropine at full normal dosages did not produce such cessation. It required double the usual oral dose of atropine, 0.8 mg. intravenously, to duplicate the aperistaltic action of Pro-Banthine. This dose of atropine produced pronounced discomfort and tachycardia with ventricular rates as high as 150 per minute.

It is this pharmacologic superior-

ity of Pro-Banthine which has made it the most widely prescribed anticholinergic in such conditions as peptic ulcer, functional hypermotility, irritable colon, pylorospasm and biliary dyskinesia.

Dosage—The maximal tolerated dosage is usually the most effective. For most *adult* patients this will be four to six 15 mg. tablets daily in divided doses. In severe conditions as many as two tablets four to six times daily.

Side Effects and Contraindications—Urinary hesitancy, xerostomia, mydriasis and, theoretically, a curare-like action may occur. The drug is contraindicated in patients with glaucoma or severe cardiac disease.

Pro-Banthine (brand of propantheline bromide) is supplied as tablets of 15 mg., as prolonged-acting tablets of 30 mg. and, for parenteral use, as serum-type ampuls of 30 mg.

1. Barowsky, H.; Greene, L., and Bennett, R.: Investigators' Clinical Report. Photographs courtesy of Drs. H. Barowsky, L. Greene and R. Bennett.

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SEARLE

Research in the Service of Medicine



PRESIDENT'S PAGE

THE HOSPITAL UTILIZATION COMMITTEE



A RECENT *Wall Street Journal* ARTICLE BEGAN: "When hospitals open their doors to the first 'Medicare' patients next July 1, the scene may resemble a Times Square subway mob at rush hour."

This picture may be overdramatized, but it points to a serious problem. Our hospitals, many of them already overburdened, may well face a staggering new load under Medicare. Official estimates suggest an immediate jump of up to 30 per cent in demand for beds after July 1.

We already know that hospitals have been burdened with some unnecessary admissions and longer-than-necessary hospital stays. The public also has a moral responsibility in the matter of seeking unnecessary hospital admissions. The insurance carriers have long dragged their feet in recognizing that payment to a physician in his office for reasonable diagnostic studies is less costly to them than hospitalization, which is the Achilles heel in any insurance program.

Thus there is an acute need—now—to carefully develop policies and practices to assure the most effective use of available hospital facilities for those who need them most. To this end we have established a Hospital Utilization Committee of

the Medical Society of the District of Columbia, with Dr. William H. Devlin of Providence Hospital as Chairman. We hope this committee in turn will provide information and assistance to any utilization committee set up in District hospitals.

Physicians should be alert to certain particular aspects of Medicare. For example, according to the present law, patients may qualify for nursing home benefits only after at least 3 days' hospitalization. Some patients or their families may be tempted to seek hospital care primarily to qualify for nursing home benefits whether or not they really need hospitalization. Also, after the patient pays the first \$40 for hospitalization, the government program takes over for up to 60 days. After surmounting their own initial payment, some patients may prefer the "free" hospital for the full term, even though a shorter stay would be appropriate medically. Moreover, some patients may postpone hospitalization which normally would take place this winter or spring in order to come under the government program after July 1. Socioeconomic and/or home conditions and a lack of nursing home beds may also "hold" patients in a hospital.

A utilization committee, of course, is no panacea. There are dangers as well as opportunities. The committee must not tell physicians how to practice medicine or interfere with physician-patient relationships. It will not tell administrators how to manage. The goal will not be simply to hold down unnecessary costs for either government or private insurers. The objective will be to assist in fostering quality care of patients and the most appropriate use of available facilities. The committee will be interested in underutilization as well as overutilization. There are wide variations among hospitals, university or community, in practices relating to admissions, length of stay, and use of special facilities. The committee will study and evaluate the experience of hospitals and utilization committees elsewhere and will study and evaluate varying trends in our own hospitals. From these studies should come information and general guidelines which can be most useful. The committee's sole role, however, will be advisory.

We are convinced it is most desirable for physicians themselves to take the lead in helping to meet clearly foreseeable utilization problems. And these programs should remain exclusively under the control of physicians, not third parties.

We commend our Utilization Committee members for their willingness to serve the profession and the public. We hope they can help each hospital in its own particular utilization problems. They deserve the understanding, coöperation, and support of all physicians practicing in the District.

Paul R. Wilner

Winfred Overholser, M.D.

Superintendent
Saint Elizabeths Hospital
1937-1962

Member, Editorial Board
Medical Annals
of the
District of Columbia
1943-1962



New Hope for the Future*

*"Inasmuch as ye have done it unto one of the least of these my brethren,
ye have done it unto me."*—ST. MATTHEW: 25:40

MY REASON for this choice of text is a very simple one. The text was once suggested to me by one of our patients in connection with Dr. Winfred Overholser. Dr. Overholser once informed me that these words were Dorothy Lynde Dix's favorite Biblical text and that if we were to look closely at Wesley Wilkins' mural in Center Building at the Hospital we can actually discern the text in the open Bible. It is, then, most appropriate. We almost invariably associate it with those who have devoted their lives to working with others. It comes naturally to mind when we remember the many years of devoted service and concern that have been shown us by Dr. Overholser. However, it is with a word of caution that I would have you look at these words with me.

Almost invariably when these words are quoted we think of those who for want of a better term have been called the "do-gooders." When he used these words I believe Jesus really spoke more of human dignity. He did not simply pity people—he gave people back to themselves (a phrase, I might stress, which has deep significance to us in mental hospitals). He was able to discern the shattered self-respect behind the outward signs of illness and to recognize it for the greater evil.

Especially for those of us who are sick or may have lost our usual liberties, this "do-gooder" kind of person is offensive. But all too frequently, even yet, in trying to encourage people to works of mercy we fall into the trap of "trying to do for others." Such an attitude often results in a lowering of the self-esteem of the other person toward whom the acts are directed. There are few things more degrading and debasing to the dignity of the human being than to have somebody else do for him what he ought to be able to do for himself. This is particularly true when the

* Adapted from a sermon delivered at the Protestant Memorial Service for Dr. Winfred Overholser, Superintendent 1937-1962, at Saint Elizabeths Hospital, Washington, October 11, 1964.

individual has not lost his capacity to do for himself but is treated as though that capacity had been lost.

Not infrequently over the years we in mental hospitals have been treated as though we could not do for ourselves. In some instances, of course, this is true. When the illness is so serious and so acute there are times when we must depend upon the ministrations of others. However, in the majority of instances, in my opinion, patients in mental hospitals can not only do for themselves but are desirous of doing for themselves much of what they need for their own treatment. Those of us who would be engaged in sensitive and intelligent works of mercy must of necessity be able to discern the most helpful kind of contribution needed to enable others to do for themselves. As Jesus once put it, this would require "the wisdom of the serpent with the harmlessness of the dove"—a neat trick, if you can do it.

The man we now remember and honor abundantly demonstrated his understanding of this basic principle of good treatment. Over the years we have had numerous illustrations whereby he encouraged us, whoever we may have been, rather than doing things for us. Dr. Overholser in his own unique and quiet way encouraged all of us to participate in the ongoing activities of the hospital. For example, when the date stone of our chapel was laid in 1955 it was Dr. Overholser who arranged for 2 patients to take an important part in the official ceremonies commemorating that occasion. His act was a specific recognition of the fact that the patients had an equally important and necessary part to play in the dedication of this building. When the chapel was dedicated at a Protestant service in December 1956 patients again took an official part in the dedication rites, a fact indelibly recorded in the inscription on the plaque placed on our Holy Communion Table. Indeed, he went even further—publicly, at that service, he asked the patients whether they were willing to accept this chapel as their place of worship.

Over the years under Dr. Overholser's encouragement, government and administrative committees of patients have grown up at Saint Elizabeths Hospital—not without pain, I might add, but they have grown up among us, and the treatment programs developed at Saint Elizabeths Hospital have more and more included patients in their planning and development.

This attitude has given all of us a new hope for the future. We see now more clearly the way in which our treatment programs must develop for

the utmost benefit to be rendered to all of us. We can now increasingly look more to an open door policy and greater freedom in mental hospitals. Our Mental Health Week activities have demonstrated that it is our intention not to hide from the public the more difficult areas of our concern. Indeed, it was with Dr. Overholser's encouragement that we opened up some of the more troublesome spots in the hospital so that the public might rightly see the difficulties under which we labor and be encouraged to assist us in making remedial changes. Dr. Overholser's attitude was one of openness and not concealment, courage and not fear. His was the full recognition that only as we manage to enlighten and inform our community can we ever hope to eliminate the stigma, misunderstanding, suspicion and fear which are altogether too often still associated with the mental hospital and mental illness. It is only with such an attitude that we can tear down the wall of isolation which separates us from the rest of the community. After all, as Dr. Overholser repeatedly said, "The mentally ill are very much like us, only more so."

Perhaps one of the most difficult problems with which we must continue to struggle for some time to come is the honest admission that most of our mental hospitals are hospitals in name only. It becomes increasingly clear, as the evidence accumulates, that the close to 750,000 people in our mental hospitals today are really receiving very little treatment—treatment used in the deep meaning of that word. It is true that many devoted servants, whether they be doctors or nurses, attendants, or those in any other discipline, are doing all that they can, and sometimes I think they're doing more than they can do. But what their results come to is something close to being almost self-defeating. There are just so many people, so little resources, so few adequately trained personnel, that what we often end up with is not hospital treatment but a program of custodial care.

To change this situation was one of the basic objectives of Dr. Overholser. Active as he was both nationally and internationally in the area of mental health, his work has resulted in changes in commitment procedures, raising of standards for mental hospital administration, and changes in public attitudes toward those who are mentally ill. His work has given us encouragement to speak boldly and bluntly about our major concerns. It seems to me that the time has now come when we must graphically and factually describe our modern mental hospitals as the places they

really are, where much more could be done than is now being done. There is no question in my mind that we know far more about the treatment of mental illness than we have been able to put to use. This must and can be changed.

Heroic efforts have of course already been made. With the advent of the newer drugs a new sense of encouragement has pervaded our hospitals as well as the staffs of these hospitals. But what is needed now is a much more coördinated treatment program. This requires the melding of essential treatment, training, and research goals.

We must recognize clearly that to be able to help those who have severe difficulties in living, the deeply troubled people of our time, we must first seek to understand something of what made it necessary for them to become ill. This is the first and the most important step in treatment. This attitude gives dignity to the patient as a person. This attitude of seeking to understand and being open to any and all real treatment measures was an essential characteristic of Dr. Overholser's great career.

Such "seeking" obviously pertains to the area of research. But research cannot be done in a vacuum. It must be conducted with people living as persons with one another if we are to understand something of the meaning of the mental illness which is part of their living. Hence the asking of questions and the seeking for causes cannot be separated from an active ministry to the people who exhibit these illnesses.

If I heard Dr. Overholser accurately—and we talked often of this—this then would constitute effective treatment: Real treatment exists when those ministering to the mentally ill are at the same time seeking to understand something of what made the illness necessary, and are also, as part of the program, attempting to teach their understandings to others equally concerned about the mentally ill. When we have combined ministering with seeking and interpreting we can say we have coördinated treatment, research and training. It is precisely this interdisciplinary effort—for it does call upon many disciplines to pool their resources to achieve such objectives—that Dr. Overholser constantly encouraged here at Saint Elizabeths Hospital.

I as a chaplain have occasion to be most grateful to him. It was with Dr. Overholser's encouragement in 1944 that I became the first clinically trained full-time Protestant chaplain to be accepted on the staff of Saint Elizabeths Hospital. As soon as it was possible to do so, Dr. Overholser arranged to have my stipend paid by the hospital

rather than by the Council of Churches which had originated the chaplaincy program. It was with Dr. Overholser's encouragement that the first students in clinical pastoral training came to this hospital in the summer of 1945. Since then that program has grown enormously until our students are now numbered in the hundreds and are scattered to the ends of the earth, and 6 different levels of clinical pastoral training have been made available both to students for the ministry and ordained clergymen. It was through Dr. Overholser's encouragement that the first Roman Catholic training program was developed at Saint Elizabeths Hospital. Now we are privileged to have 6 Roman Catholic priests in training for a full year, and with them we have 10 Protestant clergymen in training for 1 to 3 full years. It is to this work that President Kennedy referred in his letter of September 12, 1962, addressed to Dr. Overholser, thanking him for establishing this well-known program:

THE WHITE HOUSE

WASHINGTON

September 12, 1962

DEAR DR. OVERHOLSER:

I appreciate very much your bringing to my attention the interdisciplinary clinical teaching program you have introduced and congratulate you for the fine success you are having with it. We owe you a special debt of thanks for establishing an interfaith as well as an interdisciplinary training, treatment and research program. It is a splendid capstone to your 25 years of service as Superintendent of Saint Elizabeths.

I know of no greater way of doing God's work than helping those who suffer from mental illness. The 40 trainees you have participating in this program from many geographic areas and many religious groupings are engaging in a noble pursuit. Please extend to them my warmest appreciation for the dedication they are showing in ministering to the needs of our mentally ill.

Sincerely,
(Signed) JOHN F. KENNEDY

There are many other things that could be said of Dr. Overholser, but he does not need to be extolled. There is, however, one additional fact which I must emphasize. It is that he was genuinely concerned about the dignity of the human being in the person of the patient. When this has been spelled out in such practical ways that the patient himself comes to feel a part of the treatment team and recognizes not only that he has a contribution to make to his own therapeutic program but that his own understandings may con-

Some people get away from colds and sinusitis



by getting away from frigid weather



. . . but if your patient can't get away, relieve sneezing, running nose, and congestion of colds and sinusitis all day or all night with one

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tribute to the healing of others, we indeed have occasion to be deeply grateful. And as a result of Dr. Overholser's influence this has come to be more and more the important attitude of this great hospital.

We all know that a hospital is not just a group of buildings. It is a community of people; some of us are patients and some of us are staff. The patients come seeking help; those who work here do so to offer help. As complicated as life in a modern mental hospital sometimes seems, this is the essential, the basic fact. The help to be obtained does not depend only on the buildings but on the skill, the devotion, the energy, and the good will of those who are here to make their understanding available. In the final analysis it depends on what kind of a person is doing this. We have been most fortunate here at Saint Elizabeths to have people like Winfred Overholser. For it is as an individual, as a person that we honor and memorialize him today. It is to him as a person that we are grateful.

Much has already and still will be said at other times and in other places of the professional skills of Dr. Overholser. Let us here acknowledge with gratitude his leadership as an individual who by example has attracted to this hospital, and encouraged in their work, others who too seek to serve their fellow men.

It is in this way, then, that I would use our Lord's words: "Inasmuch as ye have done it unto the least of these my brethren, ye have done it unto me." Well done, good and faithful servant.

THE REVEREND ERNEST E. BRUDER, D.D.
*Director of Protestant Chaplain
Activities, Saint Elizabeths Hospital*

Health Dept. Notes

Public Health and the Scientific Assembly

THE DEPARTMENT OF PUBLIC HEALTH is pleased to participate in the 33rd ANNUAL SCIENTIFIC ASSEMBLY of the D. C. Medical Society. This ASSEMBLY has become a major event each year for the professional health and medical community of the Washington Metropolitan Area.

The scientific papers which members of our staff are giving and the educational exhibits which

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we are providing are indicators of the Department's continuing interest in basic, clinical and applied medical research. The Department encourages such staff activity as a means of improving our public health services and as a parallel to our providing these services to residents of the District.

The several exhibits shown under Department auspices reflect some of our programs in public health, patient care, teaching, research and hospital administration. Among them are the following:

- An environmental health exhibit in 3 parts, relating to air pollution, radiologic health, and water quality control. These are 3 important elements of environmental health in the District. We seek to reduce the hazards to health which result from uncontrolled trash burning, automotive exhausts, and other sources which send pollutants into the atmosphere. We seek to ensure that radiation equipment used in the District is safe to the user and to the patient, and we endeavor to maintain the quality and safety of the water supply in Washington, for which the Department has legal responsibility.

- A major exhibit on group A streptococcus and its identification by the fluorescent antibody technique. The Department has a substantial pro-



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PIONEERS IN THE APPLICATION OF BIOMECHANICAL PRESSURES

gram on rheumatic fever in the District, stressing the benefits to physician and patient of early diagnosis, prompt therapy, and continuing follow-up. This exhibit features the fluorescent dye combining only with group A streptococci as a rapid and specific identification for this infection. Such diagnostic tests are offered through Health Department laboratories.

- An exhibit of color transparencies reporting on a research project at Glenn Dale Hospital. This is based on case studies of chronically-ill, hospitalized patients and the use of granulated sugar in therapy for decubitus ulcer. This is a clinical study with implications which should interest the practicing physician.

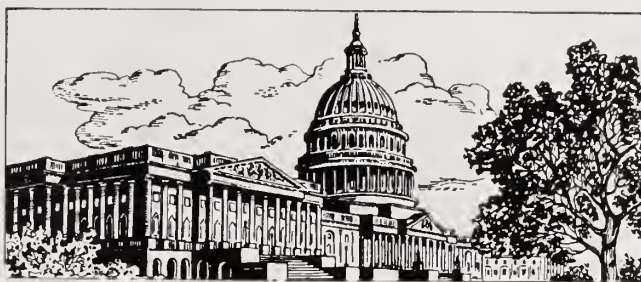
- An exhibit of the value of bronchography when bronchoscopy fails, based on experiences of the pulmonary disease service at D. C. General Hospital. This exhibit uses viewboxes to describe diagnostic examination of the bronchial tree with contrast media, reporting on a series of more than 200 bronchograms. The procedure is complementary to other methods of diagnosis and is a means of obtaining information otherwise not attainable.

- An exhibit from the orthopedic service at D. C. General Hospital, reporting on pseudoarthrosis in femoral fractures. This study traces the sequence of events after midshaft fractures in rats, demonstrating the effects of repetitive motion in early states of healing and repair. Continued healing and growth tend to make permanent what has been undesirable conditions detected in the earlier processes.

These exhibits and displays, prepared in our health education division, are examples of the Department's range of interests in scientific medicine. There will be additional exhibits, including one on venereal disease, with printed educational materials and other items which demonstrate the Health Department's role in maintaining the well-being of the community in coöperation with the medical profession.

The 33rd ANNUAL SCIENTIFIC ASSEMBLY is an opportunity to bring together, at one time and in one place, examples of this coöperation which continues throughout the year.

MURRAY GRANT, M.D., D.P.H.
D. C. Director of Public Health



NEWS & PERSONALS

Summary of Executive Board Actions

The Executive Board of the Medical Society of the District of Columbia held its dinner meeting in the Society's building, September 27, 1965. Present were Duane C. Richtmeyer, Chairman, C. Willard Camalier, Jr., Karl C. Corley, Darrell C. Crain, J. Spencer Dryden, Raymond T. Holden, Kenneth L. McCoy, Edward W. Nicklas, Paul R. Wilner, and Mr. George W. Cooley, Secretary. Also present were James T. Curtin, Chairman of the Committee on Postgraduate Education, and Mr. Lou Brott, public relations counsel.

The minutes of the meeting of August 23, 1965 were approved as mailed.

Committee Meetings: The following meetings were listed by the Secretary as having been held since the Board last met:

- September 1 Preliminary meeting for consideration of special Postgraduate TV Program
- 8 Ad Hoc Committee re laying of cornerstone at 2007 Eye Street
- 9 Traffic Committee
- 10 Fee Review Committee
- 13 Speakers Bureau Committee
- 14 Traffic Committee with Department of Motor Vehicles
- 15 Board of Credentials
- 16 Medical Bureau Committee
- 20 Committee on Medicolegal Problems
- 20 Journal Exchange Committee
- 21 Grievance Committee
- 22 Committee on Hospital Utilization

Postgraduate TV: Dr. Curtin reviewed a proposal for a regular educational program via TV to be sponsored by the Medical Society in coöperation with various local medical institutions. The proposal was approved in principle and referred to the Postgraduate Committee for further study in consultation with the Committee on Liaison with Medical Schools and Hospitals and the Committee on Public Information and Education.

Public Relations: Mr. Brott, the Society's public relations consultant, reported briefly on the progress being made in preparing for Community Health Week (November 7-13). Dr. Crain reported on the Speakers Seminar on Medicare and on plans to use the members of the Speakers Bureau to discuss the new legislation on health care of the aged.

Appointments and Nominations: Captain Rufus J. Pearson, Jr., MC, USN, Director of Professional Services, U. S. Naval Hospital, and Colonel Loren F. Parmley, MC, USA, Chief, Department of Medicine, Walter Reed General Hospital, were approved as Consulting Editors to the MEDICAL ANNALS. They succeed Lt. Comdr. Vernon N. Houk, MC, USN, and Colonel Richard I. Crone, MC, USA, respectively.

Edward W. Nicklas was nominated to succeed Henry L. Darner, and C. Willard Camalier, Jr. and Alfred A. J. Den were nominated to succeed themselves on the Board of Medical Service of D.C., each for a term of 3 years.

Brooks G. Brown was nominated to succeed himself on the Board of Group Hospitalization, Inc. for a term of 5 years.

Medical Bureau Membership: It was voted that in the future membership in the MEDICAL BUREAU for nonphysicians would not be accepted, although all nonphysicians now on the BUREAU will be permitted to retain such service.

Hospital Outpatient Emergency Medical Care: The Secretary was authorized to publish in the MEDICAL ANNALS a policy statement previously adopted by the Executive Board relating to the treatment of and charges for patients in hospital emergency rooms, with copies to be sent to the Hospital Council of the National Capital Area.

Annual Davidson Lecture: The Secretary reported that this lecture has been scheduled for

January; the topic will be "The Myth of the Healing Team."

Medical Annals: The Secretary reported that Waverly Press had notified the Society of an increase in the cost of printing the *MEDICAL ANNALS*, effective January 1966.

Professional Liability Rates: Questions were raised in reference to the District's rates for professional liability, and the Secretary was instructed to determine whether or not these had been raised as of May 1965 without consultation with the Society's Medicolegal Committee.

Public Dictating Services: The Secretary read the following reply from the AMA Law Department to an inquiry concerning such services: "I know of no specific policy statement of AMA which prohibits use by physicians of public dictation services. However, I would caution physicians that they may be held legally responsible for damages arising out of violation of the patient's right of privacy if confidential information entrusted to the physician is disclosed by persons whom he employs to render secretarial services."

Board of Credentials: The Executive Board approved for membership the following applicants recommended by the Board of Credentials:

Active Members

Alice H. Altstatt, George Washington University Hospital
 William L. Banfield, 2520 L Street, N.W.
 Rowland H. S. Bedell, 4820 Alton Place, N.W.
 Margaret Berendes, 1800 R Street, N.W.
 Theodore F. Blackwelder, 825 New Hampshire Avenue, N.W.
 Robert N. Butler, 3815 Huntington Street, N.W.
 J. Ronald Day, Jr., 4010 West Underwood Street, Chevy Chase, Md.
 Oscar DePriest III, Kirk Army Hospital, Aberdeen, Md.
 Philip J. Ferris, 915 19th Street, N.W.
 Everlee Gordon Franks, 1021—46th Street, N.E.
 George R. Hewlett, 2121 Pennsylvania Avenue, N.W.
 Violet Bowen Hugh, 1311 Delaware Avenue, S.W.
 Arthur G. Kreischer, 5401 Western Avenue, N.W.
 John R. Lilly, 2125—13th Street, N.W.
 Carlos Ramon Matta, Providence Hospital
 George F. Miller, 1150 Connecticut Avenue, N.W.
 Robert P. Nirschl, 1801 Eye Street, N.W.
 Harding W. Olson, 3000 Connecticut Avenue, N.W.
 Arthur R. Pilkerton, Jr., Georgetown University Hospital
 Thomas Sofianides, 1150 Connecticut Avenue, N.W.
 Richard T. VanOrden, 1801 Eye Street, N.W.

Associate Members

Yussef Akbari, 3730 Nichols Avenue, S.E.
 Bomen Kim, St. Elizabeths Hospital
 Reynaldo Orjuela-Gomez, D. C. General Hospital
 Hugo F. Keunen, 1835 Eye Street, N.W.

Ali Moghtader, 2121 Pennsylvania Avenue, N.W.
 Louis Q. Pugsley, Seven Corners Professional Building, Falls Church, Va.
 Morton Solomon, Box 2067, Arlington, Va.

The following changes in membership status were approved:

Active to Associate: Leo Donovan
Associate to Active: Arthur J. Levens, Stylianos Protonotarios, and George E. White.
Resident-Intern to Associate: Azceca V. Khayat.

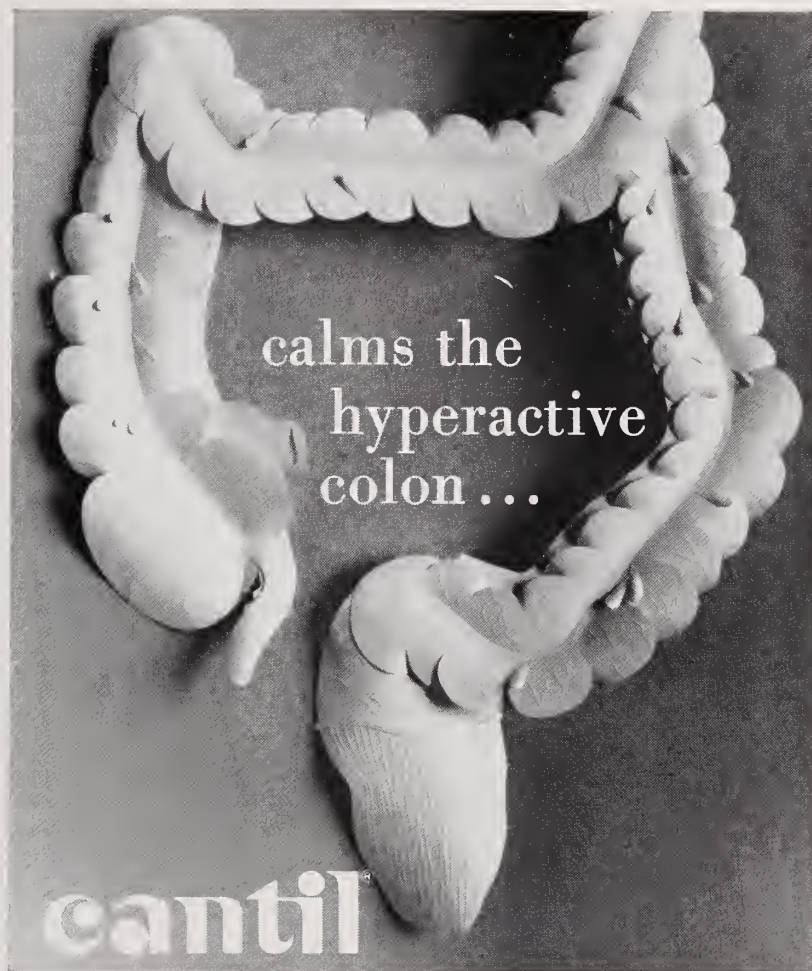
Meetings

The Annual Business Meeting of the Medical Society of the District of Columbia will be held on Sunday afternoon, November 21, at 3:00 p.m. in the auditorium of the Society's building at 1718 M Street, N.W. Reports will be given by the officers and new officers for 1966 will be elected. Refreshments will be served in the library following the meeting.

The Second Industry Conference on Nonproprietary Nomenclature for Drugs will be held, December 9, 1965, in New York City. It will be concerned with procedures whereby drugs get their nonproprietary names and the guiding principles for the selection of such names. The conference will be held under the auspices of the U.S. Adopted Names Council, the nomenclature committee sponsored by the American Medical Association, the United States Pharmacopeia, and the American Pharmaceutical Association.

General News

Dr. William Huffman Stewart has been nominated by President Johnson to succeed Dr. Luther L. Terry as Surgeon General of the Public Health Service. A commissioned officer in the Public Health Service since 1951, he was appointed Director of the National Heart Institute on August 5, 1965. A native of Minneapolis and a graduate of the University of Minnesota, Dr. Stewart received his medical degree from the Louisiana State University School of Medicine in 1945. He served in the Army Medical Corps from 1946 to 1948. In 1951 he gave up pediatrics



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Cantil (mepenzolate bromide) works in the colon. In irritable colon, spastic colon, ulcerative colitis and other functional and organic colonic disorders, it acts to:

- control diarrhea/constipation
- relieve spasm, cramping, bloating
- make patients more comfortable

with little effect on stomach, bladder or other viscera.

"In 40 of 44 cases of irritable or spastic colon, Cantil [mepenzolate bromide] or Cantil with Phenobarbital reduced or abolished abdominal pain, diarrhea and distention and promoted restoration of normal bowel function . . . Cantil [mepenzolate bromide] proved to be singularly free of anticholinergic side-effects. Blurring of vision or dryness of the mouth were occasionally seen and were usually managed with a reduction in dosage. Urinary retention, noted in two cases was eliminated in one by reducing dosage."¹

IN BRIEF:

One or two tablets three times a day and one or two at bedtime usually provide prompt relief. Cantil with Phenobarbital may be prescribed if sedation is required.

Dryness of the mouth or blurring of vision may occur but it is usually mild and transitory. Urinary retention is rare. Caution should be observed in prostatic hypertrophy—withhold in glaucoma. Cantil with Phenobarbital is contraindicated in patients sensitive to phenobarbital.

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CANTIL with PHENOBARBITAL—containing in each scored tablet 16 mg. phenobarbital (warning: may be habit forming) and 25 mg. mepenzolate bromide. Bottles of 100 and 250.

¹-Riese, J.A.: Amer. J. Gastroent. 28:541 (Nov.) 1957



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DR. WILLIAM H. STEWART, new Surgeon General of the Public Health Service

practice in Alexandria, La., to join the Public Health Service.

Dr. Terry resigned his post to accept an appointment as Vice President for medical affairs of the University of Pennsylvania. What was described as a "mammoth retirement reception" was accorded him, September 27, at the National Naval Medical Center Officers' Club. The Honorable John W. Gardner, the new Secretary of Health, Education, and Welfare, presented Dr. Terry with the Distinguished Service Medal, the highest PHS award. Dr. Terry became Surgeon General in 1961.

Physicians who have practiced medicine for 50 or more years are invited to join the **Fifty Year Club of American Medicine** and to meet with other members at the annual meetings of the American Medical Association. The next meeting will be held in Chicago in June, 1966. An initial fee of \$5.00 includes a certificate suitable for framing and a lapel button. Doctors who are interested should send their name and address to the Secretary, Dr. J. H. McCurry, Cash, Arkansas 72421.

The Association of American Medical Colleges announced in September that **Smith Kline & French Foreign Fellowships** will be awarded again by the Association. Applications will be accepted primarily from junior medical

students in U. S. schools for grants which will enable them to broaden their medical knowledge by serving in remote medical stations in underdeveloped areas in Africa, Asia, Latin America, and Oceania, for a period of at least 10 weeks. The closing date for submitting applications is December 31, 1965.

The Selection Committee of the Association, comprised of 6 American medical educators, is under the chairmanship of Dr. Robert A. Moore, President of the State University of New York, Downstate Medical Center, Brooklyn. Serving on the Committee is Dr. Robert S. Jason, Dean of Howard University College of Medicine.

Additional information may be secured from the Association at 2530 Ridge Avenue, Evanston, Illinois 60201.

The new Institute for Biomedical Research was dedicated in day-long activities at 535 North Dearborn Street, Chicago, October 11. Dr. James Z. Appel, President of the American Medical Association, was host at dedication ceremonies, and Dr. Raymond M. McKeown, President of the AMA Education and Research Foundation, parent organization of the Institute, gave the dedicatory address.

Dr. Roy E. Ritts, Jr., formerly of Washington, is Director of the Biomedical Institute, which was created to support fundamental inquiries into basic life processes.

Hillcrest Children's Center marked its 150th anniversary, October 11 and 12, with a cornerstone laying, October 11, at the site of its new building, 1325 W Street, N.W., next to Children's Hospital.

Hillcrest's predecessor, the Washington City Orphan Asylum, was founded in 1815. The Asylum became the Hillcrest Residence, a home for emotionally disturbed children, in 1953. In 1960 Hillcrest merged with Children's House, a therapeutic day school, and the Washington Institute of Mental Hygiene, an outpatient clinic, to become the Hillcrest Children's Center at 4123 Nebraska Avenue, N.W. Two years later the Board agreed on an affiliation with Children's Hospital, and Dr. Reginald Lourie, Chairman of the Department of Psychiatry at the Hospital, became Medical Director of the Center as well, which offers psychiatric and educational services to emotionally disturbed children and their parents.



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*Need in human nutrition not established. **As acid resistant granules equivalent in activity to 300 mg. Pancreatin N.F.

Side Effects and Contraindications: DACTILASE is almost entirely free of side effects. However, it should be withheld in glaucoma and in jaundice due to complete biliary obstruction.

Administration and Dosage: One tablet with, or immediately following each meal. Tablets should be swallowed whole.

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Dr. James R. Heller, who resigned the presidency of Memorial Sloan-Kettering Cancer Center in New York City in 1964, has been appointed Special Consultant on International Activities at the National Cancer Institute. Dr. Heller retired from the Public Health Service in 1960 with the rank of Assistant Surgeon General in the Commissioned Corps. From 1948 to 1960 he was Director of the National Cancer Institute.

Mr. Frank E. Carey, popular science writer for the Associated Press, was selected to receive the James T. Grady \$1000 Award at the 150th Annual Meeting of the American Chemical Society in Atlantic City, September 13. The award is given "to recognize, encourage and stimulate outstanding reporting directly to the public which materially increases the public's knowledge and understanding of chemistry, chemical engineering and related fields."

MD's Wife, a new, bimonthly publication designed especially for physicians' wives, succeeds the quarterly *Bulletin* of the Woman's Auxiliary to the American Medical Association. The Editor is Mrs. John Wagner, of Clarks Summit, Pa. The new magazine's eye appeal is enhanced by 4-color illustrations and by liberal use of color and photographs throughout the text. Communications should be addressed to *MD's Wife*, 535 North Dearborn Street, Chicago, Ill. 60610.

Personals

Dr. Wallace M. Yater, Editor of the *MEDICAL ANNALS*, was the recipient of tributes from members of the American Association of Medical Clinics who attended its convention in Wash-



DR. WALLACE M. YATER (right) accepts a signed scroll from **Dr. Bernard A. Watson**, of Clifton Springs, New York, which he presented in behalf of the officers of the American Association of Medical Clinics at a dinner and program at the Shoreham Hotel, September 30.

ton, held at the Shoreham Hotel, September 29-October 1.

Dr. Yater founded the organization in 1949 at a meeting in the Medical Society's building which was attended by representatives of 35 medical clinics. The Association today has more than 175 member clinics in 38 states, the District of Columbia, and Canada. At the banquet, Thursday evening, he was presented a framed scroll, signed by officers and trustees of the Association, "in grateful appreciation for his services to the American Association of Medical Clinics, as founder, first president and architect of policies."

Dr. Fred A. J. Geier, internist, was the first Washington physician and one of 6 physicians to leave for Southeast Asia, October 4, under the auspices of Project Vietnam, to provide medical care to the civilian population in South Vietnam. Project Vietnam is financed by the Agency for International Development and is coördinated by the People-to-People Health Foundation, Inc. Dr. Geier will return about mid-December.

Dr. John B. Johnson, of Howard University, with 3 other heart specialists left on a goodwill mission to Brazil, Argentina and Chile in September. They will lecture and discuss difficult diagnostic problems. Their month-long tour is part of a "medical Peace Corps program" begun by the American College of Cardiology and the State Department 4 years ago.

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Obituaries

Samuel Allen Alexander, M.D.

(1891-1965)

DR. SAMUEL A. ALEXANDER, Washington otolaryngologist for 40 years, died at Doctors Hospital, September 22, 1965.

Dr. Alexander was born in Creswell, North Carolina, February 10, 1891. After receiving his medical degree from the University of Maryland in 1913 he interned for a year at the Woman's Hospital of Maryland in Baltimore. Subsequently he served as resident physician at the James Walker Memorial Hospital in Wilmington, N.C. (1913-14), at the Atlantic Coast Line Hospital in Waycross, Ga. (1914-16) and at the Episcopal Eye, Ear and Throat Hospital in Washington (1917-18).

During World War I he was commissioned in the Army Medical Corps and was stationed at Walter Reed General Hospital.

He began his private practice in otolaryngology in Washington in 1919, with offices at 1830 Eye Street, N.W., since 1925. He was formerly on the faculty of Georgetown University School of Medicine. He was consultant in his specialty to Children's and Casualty Hospitals and the Washington Hospital Center.

Dr. Alexander was Board-certified in otolaryngology. He was a member of the American Medical Association and the American Academy of Ophthalmology and Otolaryngology. He had been a Life member of the D. C. Medical Society since 1960.

He is survived by his wife, Mrs. Pearl Last Alexander, of the home address, 4851 Indian Lane, N.W., and 4 children, Mrs. Mary Bernstein,

Kenwood, Md., Mrs. Willmott H. Lewis, Jr., Potomac, Md., Mrs. Sarah Foley, Washington, D.C., and Mr. Samuel Allen Alexander, Jr., Bethesda, Md.

Paul Eanet, M.D.

(1902-1965)

DR. PAUL EANET, who was retired from active practice, died, September 25, 1965 at his home, 1453 Whittier Place, N.W. He had been in ill health since 1961.

Dr. Eanet was born in Riga, Latvia, May 15, 1902, but grew up in Washington, D. C. He received his medical degree from the University of Maryland in 1926. He interned at Providence Hospital, 1926-27 and was resident physician at the Sinai Hospital, Baltimore, 1927-28. In 1943 and 1944 he took postgraduate study in obstetrics and gynecology at Tulane University and Hahnemann Medical Center.

For his outstanding work with the Selective Service System during World War II Dr. Eanet received a Congressional citation.

He was an Active member of the D. C. Medical Society from 1930 to 1933 and was reelected in 1939. He was a member of the American Medical Association and the Jacobi Medical Society. He was very active in the support of Israel through several Jewish service clubs.

He is survived by his wife, Mrs. Ethel Wolpe Eanet, and a son, Dr. Lawrence J. Eanet, of Gaithersburg, Md., an Associate member of the D. C. Medical Society.

Samuel Chrabolowski Gordon, M.D.

(1911-1965)

DR. SAMUEL C. GORDON, Washington psychiatrist, died at his home, 3020 Albermarle Street, N.W., where he also maintained his offices, on September 13, 1965. He was an Active member of the D. C. Medical Society.

Born in Bielsk, Poland, March 13, 1911, Dr. Gordon received his early education in Poland. He attended the University of Montpellier, France, graduating in 1939. The following year he interned in Nimes, France, at the City General Hospital.

Dr. Gordon served with the Loyalist forces during the Spanish Civil War and was decorated for bravery. During World War II he served with the Polish Army in France.

After the War he went to Mexico, where he headed medical services for the Polish refugee



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IN BRIEF: ACTIONS AND USES: A single dose of Imferon (iron dextran injection) will measurably begin to raise hemoglobin and a complete course of therapy will effectively rebuild iron reserves. The drug is indicated only for specifically-diagnosed cases of iron deficiency anemia and then only when oral administration of iron is ineffective or impractical. Such iron deficiency anemia may include: patients in the last trimester of pregnancy; patients with gastrointestinal disease or those recovering from gastrointestinal surgery; patients with chronic bleeding with continual and extensive iron losses not rapidly replenishable with oral iron; patients intolerant of blood transfusion as a source of iron; infants with hypochromic anemia; patients who cannot be relied upon to take oral iron.

COMPOSITION: Imferon (iron dextran injection) is a well-tolerated solution of iron dextran complex providing an equivalent of 50 mg. of elemental iron in each cc. The solution contains 0.9% sodium chloride and has a pH of 5.2-6.0. The 10 cc. vial contains 0.5% phenol as a preservative.

ADMINISTRATION AND DOSAGE: Dosage, based upon body weight and Gm. Hb./100 cc. of blood, ranges from 0.5 cc. in infants to 5.0 cc. in adults, daily, every other day, or weekly. The total iron requirement for the individual patient is readily obtainable from the dosage chart in the package insert. Deep intramuscular injection in the upper outer quadrant of the buttock, using a Z-track technique, (with displacement of the skin laterally prior to injection), insures absorption and will help avoid staining of the skin. A 2-inch needle is recommended for the adult of average size.

SIDE EFFECTS: Local and systemic side effects are few. Staining of the skin may occur. Excessive dosage, beyond the calculated need, may cause hemosiderosis. Although allergic or anaphylactoid reactions are not common, occasional severe reactions have been observed, including three fatal reactions which may have been due to Imferon (iron dextran injection). Urticaria, arthralgia, lymphadenopathy, nausea, headache, and fever have occasionally been reported. Initial test doses of 0.5 cc. are advisable.

PRECAUTIONS: If sensitivity to test doses is manifested, the drug should not be given. Imferon (iron dextran injection) must be administered by deep intramuscular injection only. Inject only in the upper outer quadrant of the buttock, not in the arm or other exposed area.

CONTRAINDICATIONS: Imferon (iron dextran injection) is contraindicated in patients sensitive to iron dextran complex. Since its use is intended for the treatment of iron deficiency anemia only, it is contraindicated in other anemias.

CARCINOGENICITY POTENTIAL: Using relatively massive doses, Imferon (iron dextran injection) has been shown to produce sarcoma in rats, mice and rabbits and possibly in hamsters, but not in guinea pigs. The risk of carcinogenesis, if any in man, following recommended therapy with Imferon (iron dextran injection) appears to be extremely small.

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community. In 1946 he came to the United States, serving a residency in psychiatry at the Creedmoor State Hospital, New York (1948-49), and later at the Spring Grove State Hospital in Catonsville, Md. (1950-51). He moved to Washington to begin private practice and to serve part-time with the D. C. Bureau of Mental Health.

Dr. Gordon was a member of the American Medical Association, the American Psychiatric Association, the Washington Psychiatric Society, and the Jacobi Medical Society. He was Assistant Clinical Professor of Psychiatry at George Washington University School of Medicine.

He is survived by his wife, Mrs. Elizabeth Ridings Gordon, and 3 sons, John and Peter, of the home address, and Andre, who lives in Poland.

Charles Ching-Te Chow, M.D.

(1923-1965)

DR. CHARLES C-T. CHOW, pathologist and an Associate member of the D.C. Medical Society, died, August 1, 1965, at Suburban Hospital. He lived at 8 Carderock Court, Bethesda, Maryland.

Dr. Chow was born, October 26, 1923 in Shanghai, China, where he received his early education. He graduated in medicine from the National Tung-Chi University of Shanghai in 1949, then came to the United States to intern for a year at Delaware Hospital in Wilmington, Delaware. He served a residency in pathology at Doctors Hospital in Washington from 1952 to 1955, and at the time of his death was attending pathologist at Doctors. He was consultant pathologist to Montgomery General Hospital in Olney, Maryland.

Dr. Chow was elected an Associate member of the D.C. Medical Society in 1958. He was an Active member of the Montgomery County (Md.) Medical Society. He was certified by the American Board of Pathology and held membership in the American Medical Association, the American

Society of Clinical Pathology, the American College of Pathology, the International Academy of Pathology, and the American Association of Blood Banks.

Surviving him are his wife, Mrs. Kit-Hui Chow, and 5 children, Robert, Deborah, Richard, Linda and Amy. His mother, 4 brothers and 1 sister, all living in China, also survive him.

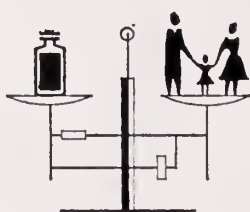
Meaning of Mental Health—Cameron

(Continued from page 535)

society, and not alone for those involved in creating.

The final "sense" is that of "integrity." Its development starts very early but is crucial, particularly for the older adult. It has to do with acceptance of religious beliefs, constructive philosophies of life, and the development of a personal code of ethics by which one can live in harmony with himself and his fellow men. It is the acceptance of our one and only mortal life cycle. It is the realization that a life cannot be lived over again. It is a sense of one's place in history, of kinship with those who have gone before and will come in the future. When one develops such a "sense of integrity" he can look forward with optimism rather than backward with despair. A person with such a "sense" is one whose behavior and beliefs in relation to major issues are largely predictable. Such a person inspires trust, the first of our "senses." We have come full circle.

To me, a mentally healthy person is capable of giving realistic trust to others, possesses a well-developed personal and social conscience, respects himself and others more for what they are than what they do, takes pleasure in achieving, is able to form warm and lasting friendships, enjoys creative endeavor for the sake of that which is created, and subscribes to those human and spiritual values that give positive meaning to life.



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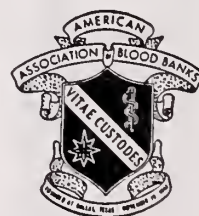
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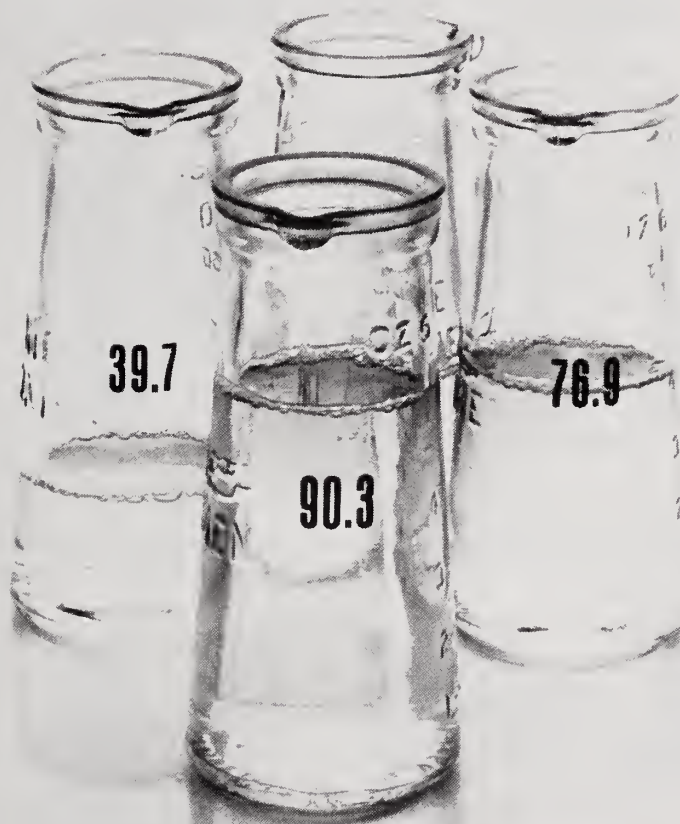
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*Gold, H., *et al*: Closed Panel Conference: Present Status of the Management of Congestive Failure and Advances in Diuretic Therapy, Journal of New Drugs, 1:177, July-August, 1961.

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IN BRIEF: ADMINISTRATION AND DOSAGE: One 2 mg. or 4 mg. tablet once or twice daily. In acute, severe decompensation, Mercuhydrin[®] (meralluride injection) may be necessary initially.

PRECAUTIONS: As with all effective diuretics, vigorous therapy may produce electrolyte depletion. Patients with severely reduced renal function should be observed carefully since thiazides may be contraindicated. Care should be taken with patients predisposed to diabetes or gout. Patients with a tendency to potassium deficiency, as in hepatic cirrhosis or diarrheal syndromes, or those under therapy with digitalis, ACTH, or certain adrenal steroids, also should be watched carefully.

SIDE EFFECTS: Nausea, flushing, constipation, skin rash, muscle cramps and gastric discomfort have been occasionally noted; rarely thrombocytopenia and bone marrow depression, photosensitivity, cholestatic jaundice, pancreatitis, perimacular edema, gout and diabetes have been caused by administration of thiazides.

CONTRAINDICATIONS: Complete renal shutdown; rising azotemia or development of hyperkalemia or acidosis in severe renal disease; demonstrated hypersensitivity.

HOW SUPPLIED: Bottles of 100 and 1000 tablets.

BOOK REVIEWS

Surgery of the Biliary Passages and the Pancreas. WALTER HESS, Privatdozent Dr. med. (Zurich), Dozent of Surgery (Basle). Translated from the German by Heinrich Lamm, Dr. Med., F.A.C.S. Operative drawings by Ingrid Schaumburg. Price, \$25.00. Pp. 638, with 267 illustrations. Princeton: Van Nostrand, 1965.

This book is a comprehensive treatise on the biliary and pancreatic systems epitomizing all that is best in the German tradition of scientific literature. After a careful description of the normal and abnormal anatomy with particular reference to the aspects important to an operating surgeon, the physiology and pathophysiology are extensively described and discussed. Each aspect of the various disease states in these related systems is fully dealt with from the significance of symptoms to the differential diagnosis. Methods of investigating the biliary ducts and pancreas anatomically and functionally, both before and during operation, are completely explained.

This latter section will be most startling and revealing to American physicians. The treatment of each condition is described and discussed, weighing all possible methods in the light of the author's extensive experience. In this section the illustrations and descriptions of operations are so clear that the inexperienced surgeon could operate expertly by studying them. The pitfalls for the unwary are explained and methods of avoiding them outlined. All these facets are assessed in the light of experience with 1,634 cases.

This work suggests that current surgical practice in biliary surgery in this country trails that of Dr. Hess's clinic markedly in certain important aspects. His advocacy of radiomanometric study during surgery is so convincing that one feels one has been operating as a blind man without it.

The statements and opinions are well substantiated by the author's own statistics, innumerable superb illustrations, and a wealth of references, many from European journals which are not widely studied here. Every surgeon interested in abdominal surgery should study this book carefully. It will stimulate thought in the experts and should be a source of continuing reference to the surgical trainee. Its value does not end there because it should prove very instructive to all doctors interested in gastroenterology. If this book has a disadvantage it is not the fault of the author. Regrettably, the translation is literal rather than literate.

NEVILLE K. CONNOLLY, M.D.

Preventive Medicine, Principles of Prevention in the Occurrence and Progression of Disease, 2nd ed. Edited by HERMAN E. HILLEBOE, M.D., and GRANVILLE W. LARIMORE, M.D. Price, \$12.00. Pp. 523, illustrated. Philadelphia: Saunders, 1965.

The first edition of "Preventive Medicine" was published in 1959. In this second edition, chapters on Preventive Medicine, Public Health and the Physician, Insect Vectors, Mental Health, Mechanisms of Infection

and Resistance, Immunization, and Vital Statistics have been added.

The book is presented in 3 parts: Part I—Prevention of Occurrence; Part II—Prevention of Progression; and Part III—Supportive Services for Preventive Medicine.

A distinguished group of contributors in the health and preventive medicine field have been drafted by the authors to write the 45 chapters in the areas in which they have nationally recognized competence.

The aim of the authors is to state the ways in which the physician interested in preventive health and public health can put the principles of preventive medicine to work. These concepts have been presented in concise form and with realistic examples.

The book can be recommended, as the authors state as their purpose, "to help students, physicians, and others in the health field understand better how to practice preventive medicine," that is, "preventing the occurrence of disease and disability, and when that is not possible, preventing their progression."

S. ROSS TAGGART, M.D.

Ophthalmology: Principles and Concepts. FRANK W. NEWELL, M.Sc. (Ophth.), F.A.C.S. Price, \$12.25. Pp. 491, with 172 illustrations. St. Louis: Mosby, 1965.

This small textbook of general ophthalmology is written specifically for the student in medical school. The book is conveniently organized into 4 sections. The first section contains ophthalmic anatomy, embryology, physiology, and pharmacology. The second section briefly explains techniques of history-taking and eye examination. The third section is devoted to a discussion of eye diseases and is organized anatomically. Each structure of the eye is reviewed, and the diagnosis and treatment of several diseases involving each structure are presented. The final section of the book describes systemic diseases that have ophthalmic manifestations. This section is subdivided into infectious, endocrine, metabolic, central nervous system, cardiovascular, hematopoietic, and connective tissue diseases.

Because of this type of organization there is considerable overlap and therefore repetition of material. However, each section may be read alone without digesting all the material in the other sections. This should be of significant help to the beginning student of ophthalmology.

The photographs are of only fair quality and it is unfortunate that no color plates were included. The medical illustrations were drawn from numerous sources (not always identified) and the divergence of style is confusing. At least 2 illustrations show mislabeled anatomy. One item in the index refers to a page which does not exist.

The brilliance of the author is not to be sullied by typographical errors, however. He is obviously master of his subject and presents a thorough and up-to-date

(Continued from page 32)

the price of “success”

1900

102

Hypertension has been called the price of success...and in some life-situations, the cost of failure. In either event, Metatensin lowers blood pressure, cushions the patient against stress and retards the progress of disease. Metatensin is effective and economical. It is well-tolerated over long periods.

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In Brief: Patients with hepatic cirrhosis or diarrheal syndromes, or under therapy with digitalis, ACTH, or potassium-losing steroids, should be observed for signs of hypokalemia. With thiazides, electrolyte depletion, diabetes, gout, granulopenia, nausea, pancreatitis, cholestatic jaundice, flushing, mild muscle cramps, constipation, photosensitivity, acute myopia, perimacular edema, paresthesias, neonatal bone marrow depression in infants of mothers who received thiazides during pregnancy, skin rash or purpura with or without thrombocytopenia, may occur. With reserpine, untoward effects may include depression, peptic ulcer and bronchial asthma. Withdraw medication at least 7 days prior to electroshock therapy, 2 weeks prior to elective surgery. Contraindications are complete renal shutdown, rising azotemia or development of hyperkalemia or acidosis in severe renal disease.

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Book Reviews

(Continued from page 30)

textbook which is organized well for the beginning student and contains many personal pearls relating to diagnosis and treatment which should be of value to the best informed ophthalmologist.

HENRY J. STARR, M.D.

Proceedings of the Third International Congress of Physical Medicine, held in Washington, D.C., August 21-26, 1960. Sponsoring Organizations: American Congress of Physical Medicine and Rehabilitation and American Academy of Physical Medicine and Rehabilitation. Pp. 820, illustrated. Chicago: Westlake Press, 1962.

I was fortunate in being present at sessions of the Third International Congress of Physical Medicine, which was held in Washington in August of 1960. Many of the subjects discussed were printed at various times in the *Archives of Physical Medicine and Rehabilitation*. This volume is the permanent record of the papers given. The Proceedings as published are exact and well classified as to its contents. The format is pleasing and the text is easier to read because the type is larger than in the reprints of the original articles.

There are some 90 papers ranging in subject matter from arthritis and rheumatoid disorders through neurologic and muscular diseases, scoliosis, traumatic conditions, and rehabilitation sciences.

Some of the papers are thought-provoking and possibly controversial in view of the rapid strides made in medicine and other disciplines in the past 5 years, for example, the subject of vertigo of cervical origin. The thought expounded is that vertigo is brought about by rotation hyperextension movements of the occipito-atlanto-epiphysiotropeal joints in a degenerative cervical spine (shown radiologically). This syndrome could well be initiated by the same motions causing a hypoxia to the brain due to vertebral artery occlusion and irritation of the sympathetic plexus along this vessel. It could also be rationalized that the dizziness may very well be a combination of abnormal neurovascular and osteogenic (arthritic) factors.

The Symposium on the Role of Government in Rehabilitation may be read often and there are cogent reasons why it should be read often.

Prolonged seoliosis and its treatment with a canvas-cork belt, I'm sure, has caused some arguments and a raised eyebrow or two while the article on postoperative care in lumbar disc syndromes will cause little disagreement. The paper on clinical evaluation of hip fracture treatment in which ultrasound was found to be superior in effectiveness over infrared therapy may well arouse some discussion from adherents on both sides of the aisle.

All in all, I found this volume to be stimulating, well worth reading, and good reference material on the subjects presented.

EUGENE G. LIPOW, M.D.

a rapid lift from the hell of depression

**often relieves
mental pain
in 2-5 days**



Doré Illustration
from
Dante's Inferno

NORPRAMIN[®] (desipramine hydrochloride)

Norpramin is a rapid-acting specific drug for the treatment of depression. Depressive signs and symptoms—sometimes described as “mental pain”—typically begin to improve in 2-5 days. Patients are more hopeful, less empty and less weighed down by their troubles. Norpramin has only slight sedative qualities, nevertheless anxiety *secondary to depression* is frequently relieved as depression is lifted. If anxiety or tension persists it can be controlled by adding a tranquilizer or by reducing dosage. Norpramin is not a MAO inhibitor. Side effects are usually mild.

DOSAGE AND ADMINISTRATION

Optimal results are obtained at a dosage of about 150 mg./day—two 25 mg. tablets t.i.d. After achieving optimal results, a maintenance dose (50-100 mg./day) should be sought.

 **LAKESIDE LABORATORIES, INC.** Milwaukee, Wisconsin 53201

IN BRIEF:

Indications: In depression of any kind—neurotic and psychotic depressive reactions; manic-depressive or involutional psychotic reactions.

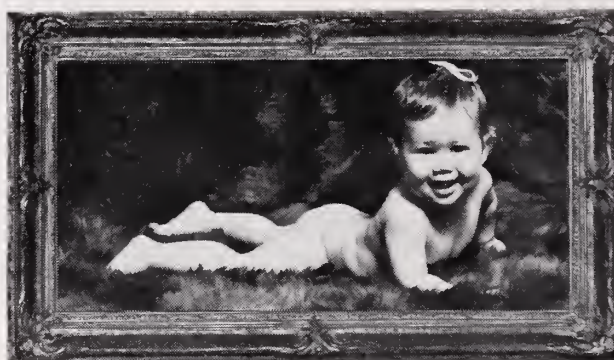
Contraindications and Precautions: Glaucoma, urethral or ureteral spasm, recent myocardial infarction, severe coronary heart disease and epilepsy. Should not be given within two weeks of treatment with a monoamine oxidase inhibitor. Safety in human pregnancy has not been established.

Adverse Effects: Side effects, usually mild, may

include: dry mouth, constipation, dizziness, palpitation, delayed urination, “bad taste,” sensory illusion, tinnitus, agitation and stimulation, sweating, drowsiness, headache, orthostatic hypotension, flushing, nausea, cramps, weakness, blurred vision and mydriasis, rash, allergy, transient eosinophilia, granulopenia, altered liver function, ataxia and extrapyramidal signs.

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1—Pomeranze, J., and Gadek, R.J.: Am. Pract. & Digest Treat. 8:73-77 (Jan.) 1957

2—Asher, L.M.: Am. J. Digestive Diseases 4:272 (Apr.) 1959



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(phenobarbital, 16 mg., pipenzolate bromide, 5 mg.)

IN BRIEF: IPTAL—Each tablet contains 5 mg. pipenzolate bromide, PIPITAL-PHB—Each tablet (or 5 cc. of elixir) contains phenobarbital (warning: may be habit forming) 16.0 mg., Piptal (pipenzolate bromide) 5 mg. The elixir contains alcohol 20%.
Side Effects: Dry mouth, blurring of vision or drowsiness may occur.

Contraindications: Withhold in glaucoma, bladder or g.i. obstruction, cardiac arrhythmias and in sensitivity to anticholinergics or phenobarbital (Piptal-PHB). Caution should be observed in patients with prostatic hypertrophy.

Administration and Dosage: IPTAL or PIPITAL-PHB Tablets: One tablet three times a day before meals and one or two tablets at bedtime. (PIPTAL-PHB Elixir: One teaspoonful three or four times daily for adults and children over six years of age.)

Supplied: IPTAL (pipenzolate bromide) 5.0 mg. Tablets—bottles of 100. PIPITAL-PHB Tablets—bottles of 100. PIPITAL-PHB Elixir—bottles of 8 fluid ounces.

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Butazolidin, brand of phenylbutazone	100 mg.
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Contraindications

Edema, danger of cardiac decompensation; history or symptoms of peptic ulcer; renal, hepatic or cardiac damage; history of drug allergy; history of blood dyscrasia. Because of the increased possibility of toxic reactions, the drug should not be given when the patient is senile, or when other potent chemotherapeutic agents are given concurrently. Large doses of Butazolidin alka are contraindicated in patients with glaucoma.

Precautions

Before prescribing, the physician should obtain a detailed history and perform a complete physical and laboratory examination,

including a blood count. The patient should be kept under close supervision and should be warned to report immediately fever, sore throat, or mouth lesions (symptoms of blood dyscrasia); sudden weight gain (water retention); skin reactions; black or tarry stools. Regular blood counts should be made. The drug should be used with greater care in the elderly.

Warning

If coumarin-type anticoagulants are given simultaneously, the physician should watch for excessive increase in prothrombin time. Pyrazole compounds may potentiate the pharmacologic action of sulfonyleurea and sulfonamide-type agents and insulin. Patients receiving such concomitant therapy should be carefully observed for this effect.

Adverse Reactions

The most common adverse reactions are nausea, edema and drug rash. The drug may reactivate a latent peptic ulcer. Infrequently, agranulocytosis, generalized allergic reaction, stomatitis, salivary gland enlargement, vertigo and languor may occur. Leukemia and leukemoid reactions have been reported but cannot definitely be attributed to the drug. Thrombocytopenic purpura and aplastic anemia are also possible side effects. Confusional states, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hepatitis, jaundice, and several cases of anuria and hematuria. With long-term use,

reversible thyroid hyperplasia may occur infrequently.

Average Dosage

Initially, give 400 mg. daily (one capsule q.i.d.), reducing this, if possible, when a favorable therapeutic effect has been obtained. If after one week there has been no response, discontinue the drug. Butazolidin alka contains antacids and an anti-spasmodic to minimize gastric upset.

Note: The physician should be fully aware of dosage, precautions, adverse reactions and contraindications as contained in the complete prescribing information.

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"...it is extremely difficult and sometimes impossible to differentiate between 'pure depression' and anxiety and it is questionable whether depression without a certain degree of anxiety really exists."

Lehmann, H. E., Canad. Psychiat. Assn. J. 4(S): 1-12, 1959

anxiety
depression

An antidepressant designed for the clinical realities of office practice

As many physicians have reported, the large majority of neurotic depressed patients suffer from both depression and anxiety. It may be difficult to decide whether these patients are primarily depressed or primarily anxious. And yet drug treatment of only the symptom which seems more prominent may exacerbate the untreated element of the depression complex.

Consequently, it would seem that therapy specifically aimed at both the depression and associated anxiety and tension should increase success in treatment.

This is one of the important reasons why 'Deprol' has proved particularly helpful. For 'Deprol' acts rapidly both to lift the mood and to relieve the associated anxiety, tension and insomnia.

And side effects, at recommended dosage, have been infrequent and generally readily controlled.

Indications: 'Deprol' is useful in the management of depression, both acute (reactive) and chronic. It is particularly useful in the less severe depressions and where the depression is accompanied by anxiety, insomnia, agitation, or rumination. It is also useful for management of depression and associated anxiety accompanying or related to organic illnesses.

Contraindications: Benactyzine hydrochloride is contraindicated in glaucoma. Previous allergic or idiosyncratic reactions to meprobamate contraindicate subsequent use.

Precautions: *Meprobamate*—Careful supervision of dose and amounts prescribed is advised. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after use for weeks or months at excessive dosage. Abrupt withdrawal may precipitate recurrence of pre-existing symptoms, or withdrawal reactions including, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, the dose should be reduced and operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may pos-

sibly be increased by meprobamate. Grand mal seizures may be precipitated in persons suffering from both grand and petit mal. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

Side effects: Side effects associated with recommended doses of 'Deprol' have been infrequent and usually easily controlled. These have included drowsiness and occasional dizziness, headache, infrequent skin rash, dryness of mouth, gastrointestinal symptoms, paresthesias, rare instances of syncope, and one case each of severe nervousness, loss of power of concentration, and withdrawal reaction (status epilepticus) after sudden discontinuation of excessive dosage.

Benactyzine hydrochloride—Benactyzine hydrochloride, particularly in high dosage, may produce dizziness, thought-blocking, a sense of depersonalization, aggravation of anxiety or disturbance of sleep patterns, and a subjective feeling of muscle relaxation, as well as anticholinergic effects such as blurred vision, dryness of mouth, or failure of visual accommodation. Other reported side effects have included gastric distress, allergic response, ataxia, and euphoria.

Meprobamate—Drowsiness may occur and, rarely, ataxia, usually controlled by decreasing the dose. Allergic or idiosyncratic reactions are rare, generally developing after one to four doses. Mild reactions are characterized by an urticarial or erythematous, maculopapular rash. Acute nonthrombocytopenic purpura with peripheral edema and fever, transient leukopenia, and a single case of fatal bullous dermatitis after administration of meprobamate and prednisolone have been reported. More severe and very rare cases of hypersensitivity may produce fever, chills, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, anaphylaxis, stomatitis and proctitis. Treatment should be symptomatic in such cases, and the drug should not be reinstituted. Isolated cases of agranulocytosis, thrombocytopenic purpura, and a single fatal instance of aplastic anemia have been reported, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity has been reported, usually after excessive meprobamate dosage. Suicidal attempts may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

Dosage: Usual starting dose, one tablet three or four times daily. May be increased gradually to six tablets daily and gradually reduced to maintenance levels upon establishment of relief. Doses above six tablets daily are not recommended even though higher doses have been used by some clinicians to control depression and in chronic psychotic patients.

Supplied: Light-pink, scored tablets, each containing meprobamate 400 mg. and benactyzine hydrochloride 1 mg.

Before prescribing, consult package circular.

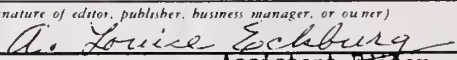
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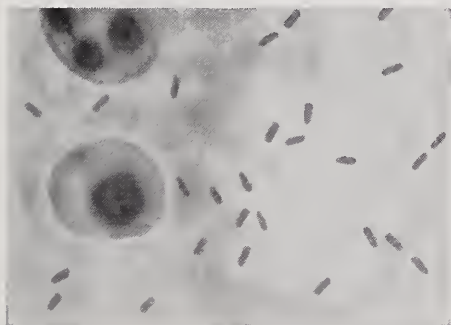
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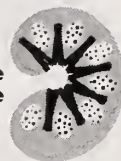
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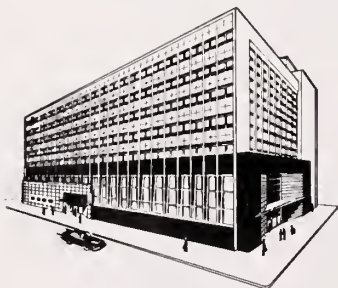


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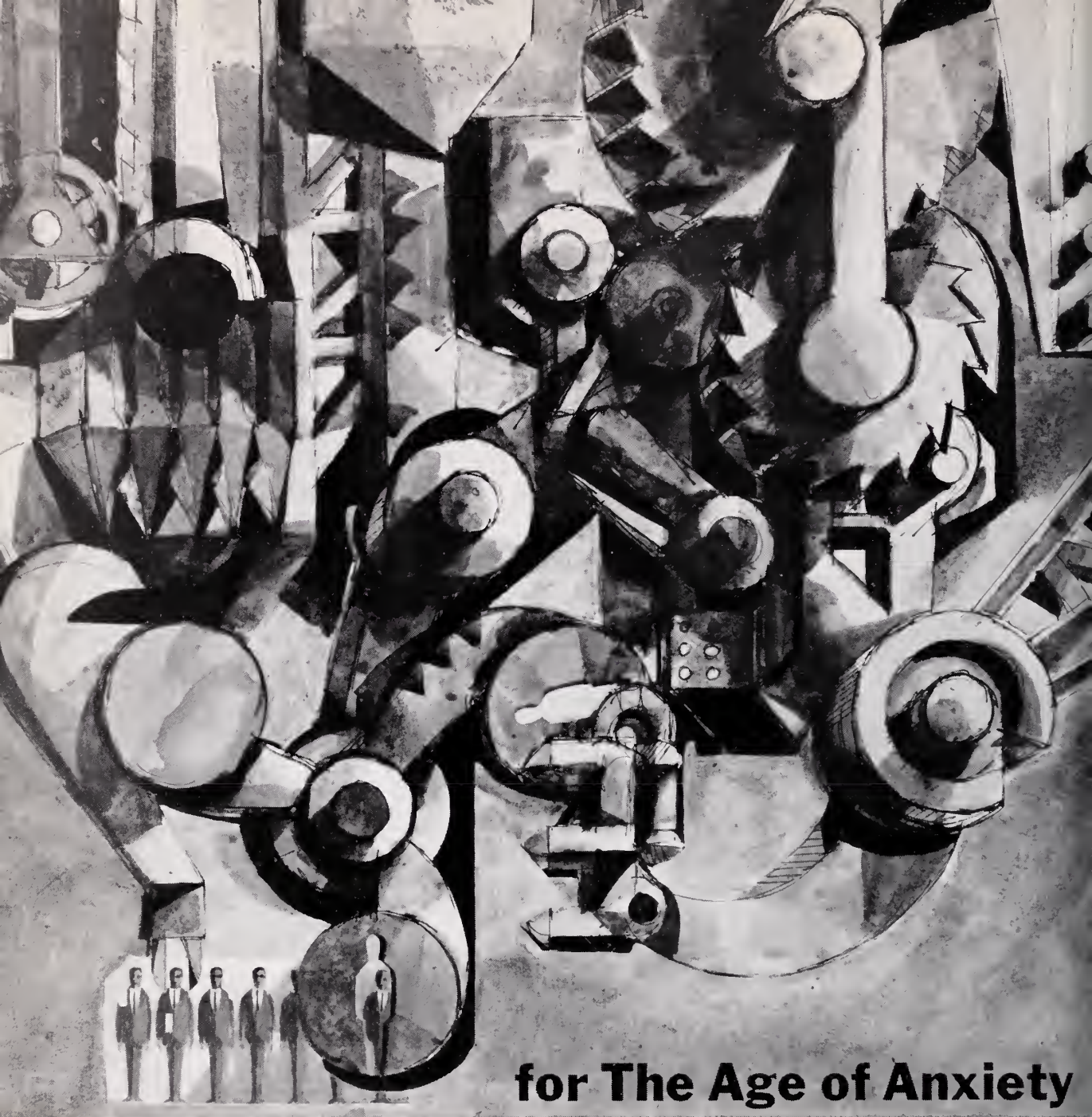
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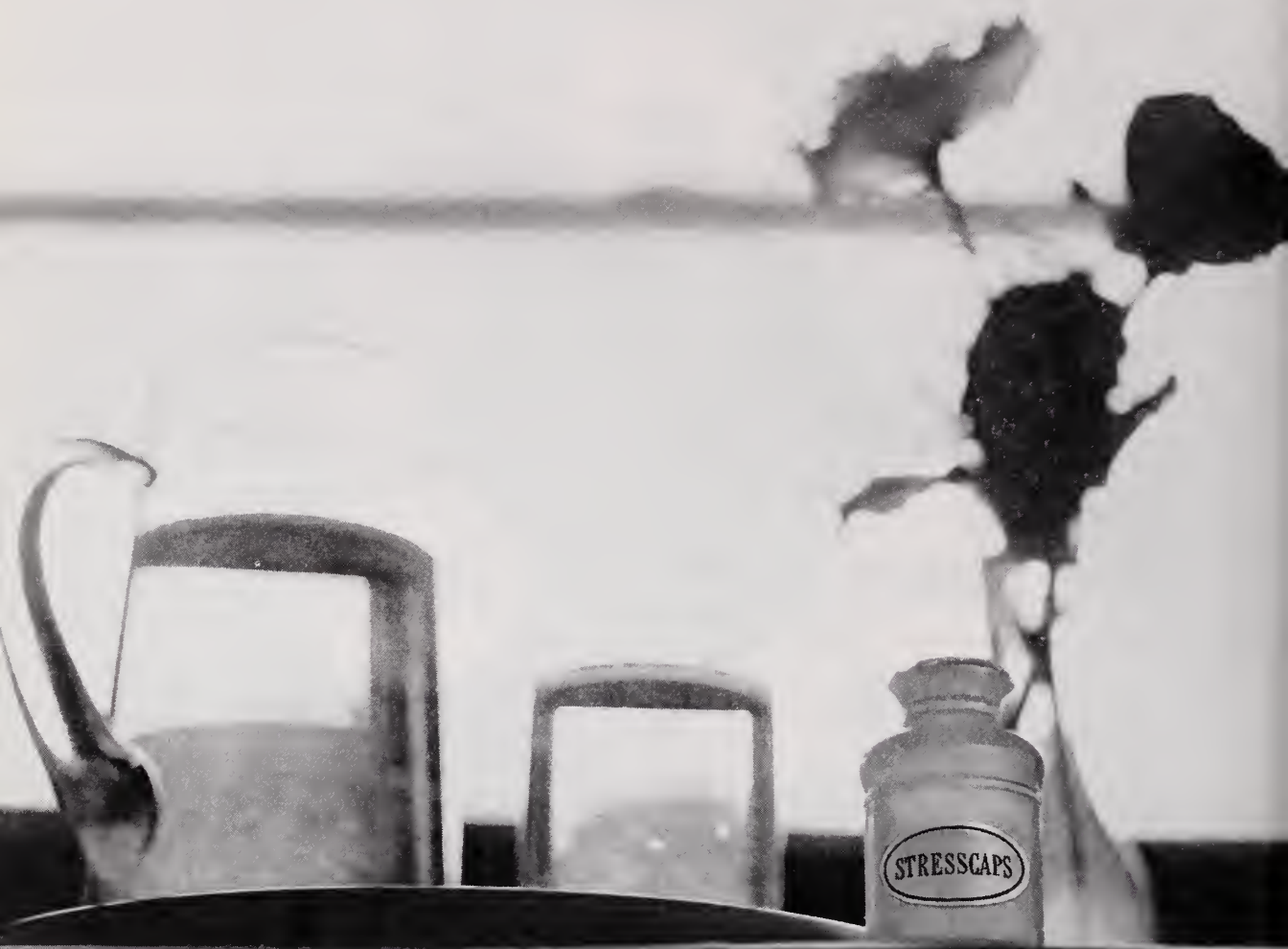
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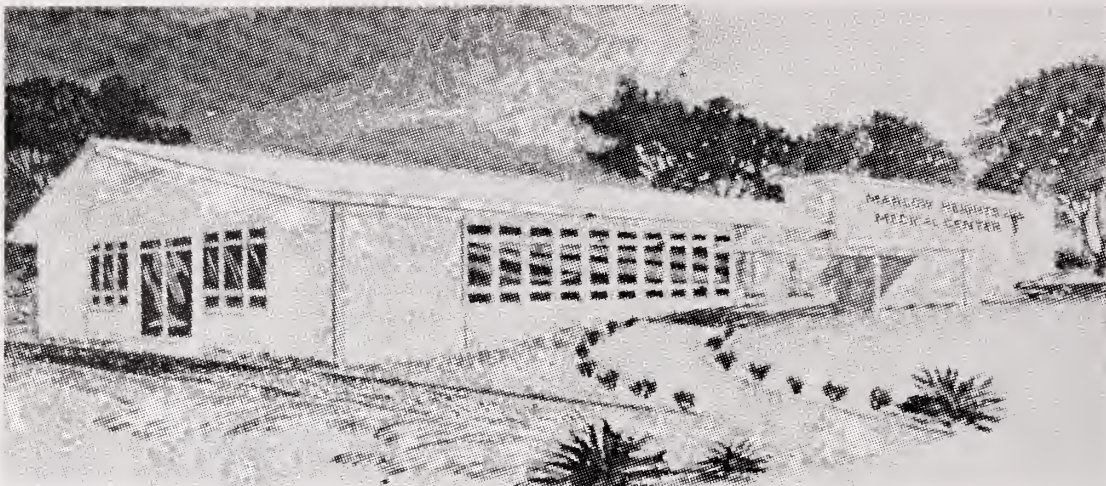
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*Tainter, M.L. and Buchanan, O.H., Ann. N.Y. Acad. Sc. 54:438, 1954

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BOOKS RECEIVED

Acknowledgment is made of the following books which have recently been received.

Diuretic Therapy. An Appraisal of Diuretic Drugs. Edited by ARTHUR C. DEGRAFF, M.D., AND ALAN F. LYON, M.D. Price, paper, \$3.50. Pp. 41. St. Louis: Mosby, 1965.

Current Surgical Management III. A Book of Alternative Viewpoints on Controversial Surgical Problems. Editors: EDWIN H. ELLISON, M.D., STANLEY R. FRIESEN, M.D., AND JOHN H. MULHOLLAND, M.D., with contributions by 104 authorities. Price, \$11.50. Pp. 519, illustrated. Philadelphia: Saunders, 1965.

Obstetrics, 13th ed. From the original text of Joseph B. DeLee, M.D. J. P. GREENHILL, M.D., F.A.C.S., F.I.C.S. (Hon.), F.A.C.O.G. Price, \$20.00. Pp. 1246, with 1296 illustrations on 1193 figures, 54 in color. Philadelphia: Saunders, 1965.

Handbook of Physical Medicine and Rehabilitation. Published under the auspices of the American Rehabilitation Foundation. Edited by FRANK H. KRUSEN, M.D.; Associate Editors: FREDERIC J. KOTTKE, M.D., AND PAUL M. ELLWOOD, JR., M.D. Price, \$16.50. Pp. 725, illustrated. Philadelphia: Saunders, 1965.

Regression of Function in Pseudo-Hypertrophic Muscular Dystrophy. ANTJE PRICE, B.S., O.T.R. Paper. Pp. 119, with 21 illustrations and 14 tables. Milwaukee: North Shore Publishing Co., 1965.

Anatomy and Surgical Technique of Groin Dissection. JOHN S. SPRATT, JR., M.D., F.A.C.S., WILLIAM SHIEBER, M.D., F.A.C.S., AND BURL MAYES DILLARD, M.D. Price, \$9.75. Pp. 97, illustrated. St. Louis: Mosby, 1965.

Management of Juvenile Diabetes Mellitus. HOWARD S. TRAISMAN, M.D., AND ALVAH L. NEWCOMB, M.D. Price, \$12.75. Pp. 147, with 16 figures, including 1 color plate. St. Louis: Mosby, 1965.

A Synopsis of Contemporary Psychiatry, 3rd ed. GEORGE A. ULETT, B.A., M.S., M.D., PH.D., AND WELLS D. GOODRICH, M.D. Price, \$6.75. Pp. 299. St. Louis: Mosby, 1965.

Clinical Anticoagulant Therapy. MYRON I. VIGRAN, M.D., M.S., F.A.C.P., with Collaborating Authors and a Foreword by Irving S. Wright. Price, \$15.00. Pp. 315 with 63 illustrations, including 1 in color. Philadelphia: Lea, 1965.

Ciba Foundation Study Group No. 19: Comparative Biochemistry of Arginine and Derivatives. In honor of Professor J. Roche. Edited by G. E. W. WOLSTENHOLME, O.B.E., M.A., M.B., F.R.C.P., AND MARGARET P. CAMERON, M.A. Price, \$2.95. Pp. 103, with 11 illustrations. Boston: Little, 1965.

Ciba Foundation Symposium: Cardiomyopathies. Edited by G. E. W. WOLSTENHOLME, O.B.E., M.A., M.B., F.R.C.P., AND MAEVE O'CONNOR, B.A. Price, \$12.50. Pp. 428, with 136 illustrations. Boston: Little, 1964.

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Precautions: *Meprobamate*—Careful supervision of dose and amounts prescribed is advised. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after use for weeks or months at excessive dosage. Abrupt withdrawal may precipitate recurrence of pre-existing symptoms, or withdrawal reactions including, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, the dose should be reduced and operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Grand mal seizures may be precipitated in persons suffering from both grand and petit mal. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

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Benactyzine hydrochloride—Benactyzine hydrochloride, particularly in high dosage, may produce dizziness, thought-blocking, a sense of depersonalization, aggravation of anxiety or disturbance of sleep patterns, and a subjective feeling of muscle relaxation, as well as anticholinergic effects such as blurred vision, dryness of mouth, or failure of visual accommodation. Other reported side effects have included gastric distress, allergic response, ataxia, and euphoria.

Meprobamate—Drowsiness may occur and, rarely, ataxia, usually controlled by decreasing the dose. Allergic or idiosyncratic reactions are rare, generally developing after one to four doses. Mild reactions are characterized by an urticarial or erythematous, maculopapular rash. Acute nonthrombocytopenic purpura with peripheral edema and fever, transient leukopenia, and a single case of fatal bullous dermatitis after administration of meprobamate and prednisolone have been reported. More severe and very rare cases of hypersensitivity may produce fever, chills, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, anaphylaxis, stomatitis and proctitis. Treatment should be symptomatic in such cases, and the drug should not be reinstituted. Isolated cases of agranulocytosis, thrombocytopenic purpura, and a single fatal instance of aplastic anemia have been reported, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity has been reported, usually after excessive meprobamate dosage. Suicidal attempts may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

Dosage: Usual starting dose, one tablet three or four times daily. May be increased gradually to six tablets daily and gradually reduced to maintenance levels upon establishment of relief. Doses above six tablets daily are not recommended even though higher doses have been used by some clinicians to control depression and in chronic psychotic patients.

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1. Torosdag, S., Schwartz, N., Fletcher, L., Fertig, H., Schwartz, M. S., Quan, R. F. B., and Bryant, J. M., Pargyline Hydrochloride as an Antihypertensive Agent With and Without A Thiazide, *Am. J. Cardiol.*, 12:822, Dec., 1963.

2. Pollack, P. J., Pargyline Hydrochloride and Methyclothiazide Combined In The Treatment of Hypertension, *Cur. Thera. Res.*, 7:10, Jan., 1965.

3. Bryant, J. M. et al., Antihypertensive Properties of Pargyline Hydrochloride, New Non-Hydrazine Monoamine Oxidase Inhibitor Compared with Sulphonamide Diuretics, *J.A.M.A.*, 178; 406, Oct., 1961.



BP reductions in the recumbent and sitting positions often are nearly as great as in the standing. In clinical trials, the average *recumbent* BP reduction was 36/18 mm. Hg.



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CONTRAINDICATIONS: Eutron is contraindicated in patients with pheochromocytoma, advanced renal disease, paranoid schizophrenia and hyperthyroidism. Until further experience is gained it cannot be recommended for use in patients with malignant hypertension, children (under 12 years of age), or pregnant patients.

The concomitant use of the following is contraindicated: other monoamine oxidase inhibitors; parenteral forms of reserpine or guanethidine; sympathomimetic drugs; foods high in tyramine such as cheese; imipramine and amitriptyline, or similar antidepressants; methyl dopa. A drug-free interval of two weeks should separate therapy and use of these agents.

WARNINGS: Pargyline hydrochloride is a monoamine oxidase inhibitor. Patients should be warned against eating cheese, and using alcohol, proprietary drugs or other medication without the knowledge of the physician. When it is necessary to administer alcohol, narcotics (notably meperidine), antihistamines, anesthetics, barbiturates and other hypnotics, sedatives, tranquilizers, or caffeine, these agents can be used cautiously at a dosage of $\frac{1}{4}$ to $\frac{1}{2}$ the usual amount. Avoid parenteral administration where possible. Withdraw pargyline two weeks before elective surgery.

Patients should be warned about the possibility of postural orthostatic hypotension. Those with angina or other evidence of coronary disease should not increase physical activity. Pargyline may lower blood sugar. Potassium depletion is unlikely at the recommended dosage, but if it occurs, adjust dosage or withdraw or provide added natural food sources of potassium; potassium tablets should be avoided wherever possible, as bleeding or obstructive ulceration of the small bowel has

been associated with their use; potassium levels should be especially watched if the patient is on digitalis or steroids, or if hepatic coma is impending.

PRECAUTIONS: When determining the anti-hypertensive effect of Eutron, blood pressure should be measured while the patient is *standing*. Use with caution in hyperactive or hyperexcitable persons. Such persons may show increased restlessness and agitation. Withdraw drug during acute febrile illness. Watch patients with impaired renal function for increasing drug effects or elevation of BUN and other evidence of progressive renal failure; withdraw drug if such alterations persist and progress. Pargyline has not been shown to cause damage to body organs or systems. As with all new drugs, complete blood counts, urinalyses, and liver function tests should be performed periodically. The drug should be used with caution in patients with liver dysfunction. With prolonged therapy, examine patients for change in color perception, visual fields, and fundi.

Elevated blood urea nitrogen, serum uric acid or blood sugar are possibilities attributable to the methyclothiazide in Eutron. Methyclothiazide may also reduce arterial response to pressor amines. Blood dyscrasias, including thrombocytopenia with purpura, agranulocytosis and aplastic anemia, have been seen with thiazide drugs.

SIDE EFFECTS: The use of pargyline may be associated with orthostatic hypotension. Mild constipation, slight edema, dry mouth, sweating, increased appetite, arthralgia, nausea and vomiting, headache, insomnia, difficulty in micturition, nightmares, impotence, delayed ejaculation, rash, and purpura have been encountered with pargyline. Hyperexcitability, increased neuromuscular activity (muscle twitching) and other extra-pyramidal symptoms have been reported. Drug fever is extremely rare. Congestive heart failure has been reported in a few patients with reduced cardiac reserve. Nocturia has been observed with the combination. If side effects persist, despite symptomatic therapy or reduction of the dose, discontinue the drug.



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Acute Aortic Dissection*

Experiences in a Community Hospital

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ACUTE DISSECTION OF THE AORTA, or more appropriately, acute dissecting aortic hematoma, no longer a medical rarity, may occur with catastrophic abruptness and rapidly pursue an inexorably fatal outcome. Surgical skill with reconstructive repair of this lesion has extended beyond the "medical center" so that it becomes incumbent upon all physicians to establish the diagnosis with dispatch if the patient is to have the benefit of such established surgical skills. It is the purpose of this report to review the incidence of this disease in a community hospital with an active emergency room and to relate our experiences with those diagnostic criteria already established in the literature. Lastly, representative case records will illustrate the results of a new, safe and rapid radiologic technique for the confirmation of aortic dissection.¹

Material and Methods

Records of all patients with the diagnosis of dissecting aortic hematoma who were seen during the period from January 1958 to December 1964 at the Washington Hospital Center were reviewed. Twenty-four cases were collected, 2 of which were chronic and the remainder acute. This represents an average of more than 3 patients per year. The age and sex

TABLE 1: Age and Sex Distribution at Onset of Dissection

AGE	MALE	FEMALE	TOTAL
20-29	1		1
30-39	1		1
40-49	1	1	2
50-59	8	2	10
60-69	3		3
70-79	3	2	5
80-89	1	1	2
TOTAL	18	6	24

Average age: 57 Range: 21-84

distribution are shown in table 1. The diagnosis was suspected on admission in 9 patients (37.5 per cent). Brachial angiography was performed and the extent of dissection demonstrated in 5 cases. Table 2 includes the antemortem diagnosis at the time of admission.

TABLE 2: Suspected Antemortem Diagnosis

Dissecting aortic aneurysm:	
1. By history, chest X-ray films and confirmed by brachial arteriography.....	5
2. By history, chest X-ray films, and physical examination, not pursued because of immediate complications.....	4
Cerebrovascular accident.....	2
Arteriosclerotic cardiovascular disease, hypertensive cardiovascular disease, congestive heart failure, and myocardial infarction.....	9
Ruptured viscera.....	3
Mesenteric thrombosis.....	1
TOTAL.....	24

*Supported in part by Development Training Grant HTS-5534 of the National Institutes of Health, Public Health Service, United States Department of Health, Education, and Welfare.

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TABLE 3: Survival Time after Admission to Hospital

1 hour	1
12 hours	4
24 hours	3
2 days	2
3 days	3
4 days	5
7 days	1
8 days	1
40 days	1
TOTAL	21

Survival times after admission (table 3) and the cause of death (table 4) are shown in 21 autopsied cases.

TABLE 4: Cause of Death

	ACUTE DISSECTION	CHRONIC DISSECTION
Congestive heart failure	3	2
Rupture into mediastinum and pleural cavity	2	
Hemopericardium	8	
Rupture into pleural cavity	2	
Rupture into mediastinum, and hemopericardium	2	
Rupture into retroperitoneal space	1	
Rupture of aorta during surgical repair	1	
TOTAL	19	2

Incidence

A review of a total of 31 separate studies on aortic dissection shows an incidence of 482 cases in 175,405 autopsies, or 1 in every 363 cases examined post mortem.² Our limited series would indicate that the incidence is even higher, being 1 in every 170 autopsies performed at this institution. This probably represents a real as well as an apparent increase in incidence and presumably reflects the higher incidence of degenerative changes in an aging population.³

Clinical Manifestations

Pain. The most prominent presenting symptom of dissection, pain, is usually abrupt in onset and may be migratory in character. The site of the pain is usually the chest, but abdominal pain occurs with surprising frequency, having been reported as the initial complaint in 10 to 50 per cent of cases.^{4, 5} Twelve of our patients had severe chest pain with subsequent referral to such sites as the back, neck, head,

shoulders and arms. Pain was usually persistent and remained until death in 50 per cent of the patients.

Neurologic changes. Neurologic changes parallel pain as one of the most common accompaniments of aortic dissection. Such changes have occurred in 15 per cent⁴ to 46 per cent.⁶ The frequency of correct diagnosis in these cases was almost doubled (80 per cent versus 44 per cent).⁷ In our series 29.5 per cent had neurologic manifestations ranging from loss of consciousness to more complex neurologic disturbances such as bilateral or unilateral paralysis.

Preexisting hypertension. Hypertension has been incriminated as a predisposing factor in the majority of series, the incidence varying from 30 to 80 per cent.² Forty per cent of our group had hypertension on admission, and a history of hypertension was present in 58 per cent.

Associated symptoms. Nausea, vomiting, gastrointestinal hemorrhage, and dysphagia have been the most common associated complaints, either due to direct pressure of the enlarged aorta or because of dissection of regional vessels subserving the gastrointestinal tract. These complaints have often been misdiagnosed as a potential surgical lesion and have been considered in the differential diagnosis in as many as 6 per cent of 278 cases of dissection.⁸ In our series 4 patients were suspected of having a primary abdominal lesion. The diagnosis of dissection was made only at necropsy. One patient was subjected to exploratory laparotomy for suspected ruptured viscus and died 24 hours postoperatively.

Physical examination. The finding of an aortic diastolic murmur, especially in the right parasternal area in conjunction with the previously described symptoms, is almost pathognomonic of aortic dissection. Such involvement results from extension of the dissection to within 2 or 3 cm. of the aortic ring,⁹ resulting in distortion of the valve and its leaflets. This occurred in 5 of our patients.

Inequality of pulse and blood pressure. This established sign of acute dissection has been present in approximately 20 per cent of some series,¹⁰ but in our series this was present in only 4 per cent.

X-ray findings. Unless X-ray films antedating the dissection are available routine chest films seldom are of diagnostic help. These are usually taken in the supine position on an un-

coöperative patient and are therefore difficult to differentiate. Widening of the aortic shadow is probably the most helpful finding.^{11, 12} Serial X-ray films may demonstrate progressive increase in the size of the superior mediastinum, but seldom can one sacrifice the time. If the clinical picture warrants, angiocardiology is the most reliable technique available in the confirmation of aortic dissection, but its use heretofore has been relatively limited. In this present study the superior mediastinal shadow was increased in 50 per cent, and no abnormality was seen in the remaining 50 per cent.

Electrocardiogram. The absence of electrocardiographic changes has been helpful and in the presence of severe chest pain increases the likelihood of dissecting hematoma.¹³ Rarely the dissection may involve one of the main coronary vessels and produce the picture of infarction. The most frequently encountered pattern is that of left ventricular hypertrophy or "strain" with occasional dysrhythmias from supraventricular foci. Our findings are essentially in consort with those of others^{2, 13, 14} since 10 patients showed left ventricular hypertrophy, 3 with atrial fibrillation and 2 with evidence of coronary disease.

Radiologic Confirmation of Aortic Dissection

With the clinical suspicion of aortic dissection, confirmation of the presence and extent of this lesion is necessary prior to definitive surgical repair. Venous angiography has largely given way to direct percutaneous retrograde catheter arteriography because of the excellence of contrast obtained with this procedure. Recent reports of rising complications at the site of catheter introduction and by inadvertent catheter passage into the area of dissection have dampened the widespread enthusiastic application of this approach.^{15, 16, 17} We have employed a technique of percutaneous needle arteriography popularized by Marshall and Ling¹⁸ for unilateral cerebral angiography. This procedure and its specific application to aortic dissection will be more thoroughly reviewed in a separate publication. With this technique a total of 5 patients underwent arteriography with successful delineation of the extent of the aortic tear. The following 3 cases demonstrate the results of the technique.

Report of Cases

Case 1. A 56-year-old woman with a history of hypertension had sudden "clawing" chest pain finally

localizing to the epigastrium and remaining there. On admission the blood pressure varied from 130/80 to 170/80. Sinus rhythm was present. A grade 2 systolic murmur over the aortic region with a blowing grade 3 diastolic murmur could be heard. The electrocardiogram was normal. An X-ray film of the chest showed an enlarged heart with prominence of the superior mediastinal shadows. Because of the diastolic murmur and the enlarged mediastinum shadow a right retrograde percutaneous needle brachial arteriogram was performed which showed dissection of the thoracic aorta extending from the aortic valve throughout the entire arch downward to the level of the diaphragm (figure 1). Surgery was performed 12



FIG. 1. Retrograde brachial arteriogram demonstrating dissection of aorta extending from aortic root to diaphragm. Note marked narrowing of the true lumen secondary to compression by hematoma.

hours after admission, but the aorta ruptured during the procedure and the patient died.

Case 2. A 70-year-old male bartender with mild hypertension experienced severe pulsating back pain while seated, with radiation of the pain to the anterior chest region. The pain increased in severity during the ensuing 12 hours and was only partially relieved by Demerol®. The man was otherwise without symptoms. The pain persisted for 7 days, diminishing in severity. Physical examination during hospitalization was otherwise unremarkable. The electrocardiogram was nonspecific, but the chest X-ray film showed questionable widening of the mediastinum. Because of the persistent chest pain and suggestive X-ray films brachial aortography was performed and revealed a definitive dissection starting distal to the subclavian artery and extending to just above the level of the diaphragm (figure 2). Because of the age of dissection and the patient's stability he was treated conservatively.



FIG. 2. Localized dissection starting at aortic arch with pronounced bulging of false lumen just distal to left subclavian artery.

Case 3. A 54-year-old man with no history of hypertensive or cardiovascular disease experienced sudden, severe chest pain, radiating to the back and abdomen. Ten minutes later the patient was unable to move his lower extremities. On admission the blood pressure was 170/90 in both arms and 150 systolic in both legs. Sinus rhythm was present. A grade 2 ejection systolic murmur over the aortic region could be heard. All peripheral pulses were equal. The electrocardiogram showed left ventricular hypertrophy. Because of the presenting symptoms and the widened mediastinum, right retrograde percutaneous needle brachial arteriography was performed which showed dissection of the aorta extending from the left subclavian artery to the level of the diaphragm (figure 3). Surgery was performed 12 hours after admission, but the patient died at the end of the procedure because of profuse hemorrhage.

Discussion

Morgagni¹⁹ and Laennec²⁰ were the first investigators to clearly describe dissection of the aorta. The more common term of dissecting aneurysm is actually a misnomer and should not be used to describe the acute process. In 1919 this was referred to as a medical curiosity,²¹ but in 1934 further information led to the first comprehensive review on the subject.⁴ The complete review of the English literature by Hirst² still remains the most authoritative study to date. Aortic dissection is most often confused with coronary thrombosis. It has also been mis-

taken for syphilitic aortitis, cerebral vascular accident, mediastinal tumor, pneumonia, diaphragmatic hernia, cholecystitis, pancreatitis, nephrolithiasis, ruptured viscus, mesenteric thrombosis, embolic occlusion of the arteries and the extremities, and disease of the lower spinal cord.²² James Pollen, a longtime student of aortic dissection who died with this condition, diagnosed it with accuracy, insisting he could feel his aorta tearing and correctly predicted that rupture would take place in the left pleural cavity.²



FIG. 3. Double-barreled aorta extending from arch to below diaphragm. Proximal end of dissection is obscure in this film.

It is apparent from the large and growing literature that the patient with dissection of the aorta does not have the classical picture of severe, unrelenting pain which marches from one region to another. Pain may occur in the face, ear or neck before it is felt elsewhere,²³ and, indeed, pain may be absent, particularly when cerebral vascular insufficiency has occurred early in the attack.^{24, 25, 26} Hirst and colleagues² noted that pain was insignificant or absent in 15 per cent of cases in which symptoms were recorded. Chronic dissection is invariably pain-free. The abrupt onset of symptoms, although varying widely in location, depending upon the site of the dissection and the aortic branches involved, is so characteristic and so often mentioned in the patient's chief complaint as to alert the physician to this possibility. If pain is

present its persistence and its refractoriness to narcotics is another reliable sign. Peripheral arterial occlusion, partial or complete, has been emphasized in the past as extremely helpful, but this has proven to be of no diagnostic assistance, since, in our experience, only 1 case had definite unequal peripheral pulses.

A variety of murmurs have been observed following the onset of dissection. Their genesis is believed to be the result of distortion of the aortic root and valve ring.^{27, 28, 29} The aortic diastolic murmur has been most often emphasized as common in patients with dissection. Its incidence actually varies widely in published series^{30, 31}; however, when present in an individual suspected of dissection it is of grave prognostic significance and strongly suggests that involvement of the root has occurred with impending rupture into the pericardium. So aware is the house staff of the frequency of this emergency that any adult with or without hypertension who has the sudden onset of chest or back pain, with or without radiation, with a normal electrocardiogram and a suspicious widening of the mediastinum by X-ray examination becomes a candidate for the diagnosis of dissection.

So simple and expeditious is the percutaneous needle brachial arteriogram that this procedure is immediately instituted. Such patients are invariably in a highly fragile physiologic state, and hence the greater the speed of confirmation of diagnosis the more optimum will be the chance of survival. The percutaneous noncatheter technique provides a safe and quick method of confirmation and involves almost no preparation. Recently the diagnosis and radiologic confirmation of dissection were made at this facility in less than 2 hours. Armed with this information, a surgical team can quickly assume control and institute specific surgical correction with a minimum loss of time.

There is recent evidence to suggest that immediate surgery may not be the ultimate answer for all cases of acute dissection, since Palmer and his co-workers³² reported the prevention of further dissection in 6 patients using antihypertensive drugs even in the face of a normal blood pressure. The longest follow-up in their series is 15 months. In uncomplicated acute dissection this approach seems to have considerable merit and may be useful in sustaining the patient through the acute episode until a more stable state for selective surgical intervention is

attained. We are instituting a pilot program at this institution in an attempt to confirm this study.

Summary

Twenty-four cases of dissecting aortic hematoma have been seen in the Washington Hospital Center since 1958. Some of the protean manifestations of this disease have been discussed. Nearly 40 per cent of the cases have been diagnosed ante mortem. A simple, direct percutaneous noncatheter brachial angiographic technique has been adapted for use in the confirmation of this lesion. This method has proven highly successful and represents a safe and rapid means of establishing the diagnosis.

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(Continued on page 588)

Therapy of Nonpsychotic Depression

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ANXIETY AND DEPRESSION, commonly encountered in all branches of medicine, are too often oversimplified or neglected. Depression, especially with somatic accompaniments, is a frequent presenting symptom in general medical practice, but because of the wide variety of complaints that anxious and depressed patients may exhibit the busy general practitioner often is exposed to the temptation and the trap of treating functional somatic symptoms rather than the basic emotional disorder. The advent of safe and effective drugs for anxiety and depression has greatly facilitated the physician's task. Since these 2 symptoms are often associated, as in the present study, the use of a single compound for treating them both has some obvious advantages.

It is also obvious that the value of a drug should be determined in part by controlled clinical trials, and these should be conducted as much as possible under the conditions of the drug's eventual use in practice. Thus, the general practitioner should play a key role, inasmuch as the emotionally disturbed patient is usually seen first by his family doctor. The non-psychiatrist physician is faced with the dual problem of determining the motive and scope of the patient's mental illness and proceeding to treat the patient, unless he decides it is preferable to refer him to a psychiatrist, e.g., if the patient is in danger of suicide.

In order to learn more about depression in this clinical setting a study was designed to organize and record data relating to a series of consecutive patients presenting themselves with symptoms of depression and to evaluate the clinical results of treatment with a combination of meprobamate and benactyzine.* A double-blind method of study including a placebo control was selected to avoid physician bias in evaluating the effects of the drug.

Deprol® was chosen as the antidepressant medication because of reported favorable ex-

perience with respect to both therapeutic efficacy and low incidence of undesirable reactions. This compound, which provides the tranquilizing action of meprobamate and the antidepressant action of benactyzine, has been reported by investigators¹⁻⁶ from various branches of medicine to be a safe and effective antidepressant, particularly in less severe depressions and when there are associated symptoms such as anxiety, insomnia, and agitation, and in the presence of emotional disturbances accompanying organic illness. In 1 double-blind study Rickels¹ showed that this compound was far superior to placebo in depressed patients attending a medical clinic. In another double-blind study McClure² reported that 77 per cent of patients given the drug combination recovered in 3 to 8 weeks while those given a placebo did not improve or became worse. The latter study included both referred patients and those in a medical clinic.

Method and Materials

The present controlled study of meprobamate-benactyzine differs in some respects from any previously reported in that it was performed in the milieu of general practice with primarily upper middle-class patients. The 101 patients consisted of 38 males and 63 females whose ages ranged from 18 to 84 years, with an average of 46.8 years. Thirteen others discontinued therapy after the first visit and were excluded from the study (these will be discussed in the section on results). Only those with clinically evident depression were selected. Children and teenagers under 18 were excluded because we have found, generally, that depression is transient in such cases and can be handled by brief counseling periods. Nor were any patients with possible suicidal inclinations permitted in this study.

Report forms were designed to record pertinent details of each patient's history, progress in terms of changes in severity of symptoms noted at each visit, general response to

* Commercially produced as Deprol, a product of Wallace Laboratories, Cranbury, N. J.

therapy, and relevant comments, including those dealing with side-effects and concomitant treatment.

In order to provide a convenient diagnostic structure in which to group patients, the following categories were noted in the report form: acute anxiety (3), anxiety neurosis (4), anxiety with depression (69), depression neurosis (14), and acute depression (11). The parenthetical numbers indicate that 94 of these patients suffered from depression. Selection was aimed at this type of patient, and depression, in general, was considered to be a subjective expression of undue sadness or dejection with parallel symptoms (table 1) which were excessive vis-à-vis the situation. "Anxiety with depression" described those patients with an approximately equal admixture of these components. "Depression neurosis" constituted a more prolonged depression, and "acute depression" related to those patients with sudden and extreme depression.

Observation of patients included the rating of 17 symptoms (see table 1 for complete listing) initially and at each visit on a numerical scale as follows: 0—absent, 1—mild, 2—moderate, 3—severe, 4—very severe. The difference between initial and final ratings represented the improvement score and was tabulated for each symptom. Since the terms severe, mild, etc. are open to a variety of interpretations, an effort was made in this study to designate evaluation of general response to therapy numerically by approximated percentage ranges (0–25, 25–50, 50–75, and 75–100). In our opinion an improvement rate of less than 50 per cent was indicative of slight and insufficient progress, whereas improvement in excess of 50 per cent indicated successful response, often sufficient to discontinue treatment. In this context it was felt that a breakdown into more discrete percentage categories would have been impractical. The category "worse" is self-evident.

Tablets of identical appearance, supplied and suitably labeled and coded by Wallace Laboratories, were administered randomly; the distribution code was not broken until the study was completed. The compounds administered were either a drug containing meprobamate 400 mg. plus benactyzine hydrochloride 1 mg. per tablet or a placebo. Initial dosage ranged from 1 tablet 3 times daily to 2 tablets 4 times daily, but in $\frac{3}{4}$ of the cases it was 1 tablet 4 times daily. Eleven patients with insomnia, mostly those on the lowest dosage regimen, received an addi-

tional 2 tablets at bedtime. Each patient was given a bottle of 30 tablets of one or the other coded medications and was instructed to return with the bottle at each visit. The dosage was adjusted at these intervals if necessary.

Duration of treatment was determined on an individual basis according to the physician's judgment of each patient's clinical progress. Length of therapy ranged from 1 to 19 weeks, with an average of a little over 3 weeks. Generally, patients were observed once every 1 to 2 weeks depending upon the severity of their hypertension and their symptoms. No sedative, tranquilizer, or antidepressant medication was given concomitantly during the period of this study, but other types of medication (i.e., for coexistent organic dysfunction) and appropriate physical therapy were allowed. Routine laboratory examinations were performed as indicated as part of the normal course of clinical management.

Results

When the data were collected after completion of the study it was found that 53 patients had received meprobamate-benactyzine and 48 had received placebo. Statistical analysis showed no significant differences between these groups of patients with regard to age, sex, diagnosis, dosage, and duration of therapy. Neither the initial body weights nor the weight changes (which were trivial on the average) differed significantly in the 2 groups. Furthermore, the initial ratings of symptom severity were not significantly different.

Table 1 indicates the number of patients in whom each of the 17 symptoms were present initially and the average severity score at that time, plus the average improvement expressed as a percentage of the initial score (the actual improvement scores have been omitted for the sake of simplicity). It can be seen that meprobamate-benactyzine was superior to placebo for each of the symptoms, the difference computed by the t-test being statistically significant ($P = <0.01-0.05$) for each symptom alone and highly significant for all symptoms combined ($P = 0.001$).

The overall improvement ratings of individual patients are shown in table 2. Again the superiority of the test drug over placebo was highly significant ($P < 0.001$) as computed by the Chi-square test.

In the patients who completed the study few

adverse effects were noted which might be attributable to therapy. Of the 53 patients given meprobamate-benactyzine 1 required a reduction of dosage because of drowsiness, 2 had various somatic complaints, primarily gastrointestinal, and 1 reported increased appetite. The only adverse effect noted for the 48 patients given placebo was increased appetite in 1 patient. In the group of 13 patients dropped from the study after the first visit 9 were taking placebo. Their reasons for discontinuing therapy were upset stomach and nausea in 1, dizziness in 3, intolerance in 1, lack of improvement in 3, and unavailability due to surgery in 1. The complaints of the 4 patients who discontinued active drug therapy were upset stomach in 1, dizziness in 1, drowsiness and weakness in 1, and dizziness and weakness in 1.

TABLE 1: Effectiveness of Meprobamate-Benactyzine and Placebo in Specific Symptoms

SYMPTOM	MEPROBAMATE-BENACTYZINE			PLACEBO		
	No. Patients	Initial Severity Score	Improvement (%)	No. Patients	Initial Severity Score	Improvement (%)
Irritability	37	52	53.8*	38	59	25.4
Dejection	51	96	55.2†	42	81	22.2
Apprehension	49	90	54.4*	46	85	29.4
Impaired family relationship	39	80	37.5†	37	78	13.5
Lost sex interest	34	63	49.2*	31	58.5	25.6
Impaired attention	12	14	92.9*	13	17	35.3
Interference with judgment	15	24	70.8	19	33	42.4
Startle reaction	14	21	66.7	17	25	44.0
Restlessness	42	63	66.7†	43	80	31.2
Insomnia	51	97	60.8*	47	99	38.4
Tremors	11	17	64.7†	22	34	26.5
Interference with coordination	6	6	83.3	7	11	27.3
Headache	21	34.5	47.8	19	37	31.1
Palpitation	17	28	57.1	12	17	29.4
Fatigue	47	100	41.0†	46	96	19.3
Increased perspiration	5	7	71.4*	4	5.5	0
Dyspnea	10	20	65.0*	7	11	0
		812.5 (total)	54.7† (average)		827 (total)	27.1 (average)

* Superiority over placebo at the level of $P < 0.05$.
† Superiority over placebo at the level of $P < 0.01$.

Discussion

In addition to the statistically analyzed data on effectiveness, which showed an approximately 2-fold margin of superiority for the drug combination over placebo, some other findings are pertinent. Of interest is the observation that depression is no respecter of age, in that the patients in this study ranged from 18 to 84 years old, but there were twice as many women as men

included. It seems appropriate to consider that this sex differential may indicate women to be more prone to depression, although it is possible that men are less apt to seek a physician's help for this complaint.

TABLE 2: Effectiveness of Meprobamate-Benactyzine and Placebo in Individual Patients

RESULTS	MEPROBAMATE-BENACTYZINE		PLACEBO	
	No. Patients	Per cent of Total	No. Patients	Per cent of Total
Worse	1	1.9	5	10.4
0-25% improved	3	5.7	20	41.7
25-50% improved	9	17.0	10	20.8
50-75% improved	20	37.7	11	22.9
75-100% improved	20	37.7	2	4.2

Of importance is the fact that the most significant ($P = .01$) drug-placebo differences were seen for some of the most typical and most important symptoms of depression, namely, dejection, apprehension, restlessness, fatigue, and family difficulties. Other responsive symptoms, significant to a slightly less degree ($P = .05$), included loss of libido, insomnia, and irritability. Less important and less common indicators, such as the startle reaction and difficulties with coordination and judgment, did not demonstrate statistically significant response to Deprol, although in some cases the scant number of such occurrences made truly valid analyses impractical.

It was also noteworthy that almost all the requests for refills of medication after completion of the study were for the drug combination. This is somewhat analogous to the observation of McClure² that patients who were switched from meprobamate-benactyzine to placebo therapy soon began to relapse into their previous state of depression.

Although the advantages of double-blind studies are well recognized in determining the value of a drug, one disadvantage may be overlooked which is particularly applicable to the evaluation of antidepressant drugs. The full potential of these drugs will not be realized from such studies as stated by Weatherall⁷ because "the personal magnetism of an enthusiastic physician is absent." Thus, although uncontrolled trials are generally more favorable to a drug than controlled ones, results are more variable because of such factors as the doctor-patient relationship and the attitude of the investigator toward the drug.

Whereas these complicating factors are probably involved to a much lesser extent in controlled trials, a factor that is equally important in both types of trial is the characteristics of the patient. Rickels¹ described a number of differences between depressed patients treated in the Medical Clinic and those treated in the Psychiatric Clinic of a large hospital. In brief, the Medical Clinic patients were less severely depressed, more suggestible and somatically-oriented, and were benefited more by meprobamate-benactyzine than by imipramine, whereas the latter drug was more effective and better accepted by the Psychiatric Clinic patients. The patients in the study reported here, with the exception possibly of socioeconomic standing, would correspond generally to the Medical Clinic type, which may account for the occurrence of drowsiness as a complaint in only 1 of the 53 patients given the drug.

In view of its large margin of superiority over placebo and its low incidence of adverse effects, as shown in this and other controlled studies,^{1,2} the judicious use of this drug combination in general medical practice may be advantageous in properly selected patients. Among the other favorable aspects already discussed it should be noted that the onset of effects of meprobamate-benactyzine were quite rapid; clinically significant responses were often noted within 4 days of the start of therapy.

Summary

This study was a double-blind comparison of meprobamate-benactyzine and placebo in 101 office patients with symptoms of depression which were associated in the majority of cases with expressions of anxiety. There was no evidence nor suggestion of suicidal intent in any of the patients. Usual dosage of the coded medications was 1 tablet 4 times daily, and the average duration of therapy was a little over 3 weeks. The 2 treatment groups of patients were

shown by statistical analysis to be well matched in all respects. The drug combination was significantly superior to placebo for each of the 17 symptoms rated ($P = 0.01-0.05$) and for all symptoms combined ($P = 0.001$), as well as in the improvement ratings of individual patients ($P = 0.001$). Symptoms occurring most frequently and demonstrating a clearly superior response to meprobamate-benactyzine were irritability, dejection, apprehension, impairment of family relationships, loss of libido, restlessness, insomnia, and fatigue. Mild adverse effects were noted in 4 patients receiving the drug and in 1 patient receiving placebo. Excluded from the analysis of the effects of therapy were 13 patients, of whom 4 had adverse effects from the drug, 5 from placebo, and 4 who did not return for observation after the first visit.

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Inhibition of Bishydroxycoumarin Activity by Phenobarbital

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BARBITURATES have been reported to interfere with the ability of coumarin-type drugs to prolong prothrombin time in some patients^{1, 2} and in guinea pigs, dogs, and several human volunteers.³ Published information does not indicate the frequency or the extent of inhibition of anticoagulation which can be expected when this combination of drugs is administered to a population of patients. Such inhibition, if significant in clinical circumstances, has important implications for the proper management of anticoagulated patients. This phenomenon is under investigation in this laboratory. The present report describes preliminary findings.

Materials and Methods

The study included 49 adult hospitalized patients without known liver disease, uremia, malabsorption, malignancy, or accepted contraindications to anticoagulation.⁴ Bishydroxycoumarin (Dicumarol®) was administered orally for 3 days to all patients in a schedule of 4.5, 3.0, and 1.5 mg./Kg. body weight on the first, second, and third days respectively. Thirty patients (22 males, 8 females), randomly selected, also received oral doses of phenobarbital, 100 mg. at bedtime and 30 mg. thrice daily beginning 48 hours prior to the first dose of bishydroxycoumarin and continuing through the period of the study. Nineteen control patients (11 males, 8 females) received no barbiturates prior to or during the anticoagulation period.

Although some of the patients were receiving other drugs during the study period, only chloral hydrate, isoniazid, and aminosalicylic acid were being taken by more than 2 patients.

Prothrombin times were measured by a modification of Quick's technique⁵ with commercial

thromboplastin* and were determined prior to therapy and once daily for at least 3 days after the first day of bishydroxycoumarin. Prothrombin times were converted to prothrombin levels, expressed as percentage of normal, by comparison with a standard curve prepared by saline dilution of pooled plasma from 7 healthy donors. In the context of this report the term prothrombin refers to the complex of factors affecting prothrombin time.

Results

The usual onset of peak activity after an initial dose of bishydroxycoumarin is 1.5 to 3.0 days.⁴ After 72 hours of therapy with bishydroxycoumarin the control group achieved a significantly greater mean prolongation of prothrombin time than did the phenobarbital-treated patients (table 1). Similarly, when pro-

TABLE 1: Change in Prothrombin Time after Bishydroxycoumarin Therapy

	MEAN TIME (SECONDS) $\pm$ S.E.		P*
	19 Patients Receiving No Barbiturates	30 Patients Receiving Phenobarbital	
Before bishydroxycoumarin	15.2 $\pm$ 0.2	15.4 $\pm$ 0.2	> .4
After 72 hours bishydroxycoumarin	30.5 $\pm$ 1.3	24.5 $\pm$ 1.4	< .01†

* Difference of means evaluated by Student's t-test.
† For males P < .06, for females P < .05.

thrombin times were converted to prothrombin levels, the mean level of the control group was lower than that of the phenobarbital-treated group (table 2).

* Simplastin, a product of Warner-Chilcott Laboratories, Morris Plains, N. J.

TABLE 2: Change in Prothrombin Level after Bishydroxycoumarin

	MEAN LEVEL (PER CENT OF NORMAL) $\pm$ S.E.		P*
	19 Patients Receiving No Barbiturates	30 Patients Receiving Phenobarbital	
Before bishydroxycoumarin	98 $\pm$ 1.5	97 $\pm$ 1.7	> .6
After 72 hours bishydroxycoumarin	24 $\pm$ 3.3	38 $\pm$ 4.6	< .05

* Difference of means evaluated by Student's t-test.

After 72 hours of bishydroxycoumarin therapy a comparatively larger proportion of phenobarbital-treated patients failed to enter the therapeutic range, as defined by each of 2 commonly used methods of evaluation (table 3).⁴

TABLE 3: Rate of Failure to Achieve Adequate State of Anticoagulation

CRITERION OF INADEQUATE ANTICOAGULATION	PER CENT INADEQUATELY ANTICOAGULATED AFTER 72 HOURS BISHYDROXYCOUMARIN	
	19 Patients Receiving No Barbiturates	30 Patients Receiving Phenobarbital
Prothrombin time <1.5 $\times$ control	10%	40%
Prothrombin level >25% of normal	21%	67%

Reevaluation of the data after deletion of information obtained from patients receiving chloral hydrate, isoniazid, or aminosalicylic acid did not materially alter the significance of the results as reported.

Discussion

In the present study phenobarbital reduced the expected anticoagulating effect of bishydroxycoumarin when these drugs were given in dosage schedules approximating those commonly used in clinical circumstances. The effect was probably significant in both males and females. The observations do not indicate whether all patients or only a sensitive subgroup exhibited some decrease in response. A large proportion of patients, however, was affected to the extent that a clinically desirable state of anticoagulation was not attained during the 72-hour study period.

An interfering effect has been noted between various forms of barbiturate and several coumarin-type drugs.^{1, 2, 3} The effect is not limited to the initial period of anticoagulation since bar-

biturates can also restore prothrombin times to normal when added to the regimen of patients already well anticoagulated.² The concurrent administration or withdrawal of barbiturates may explain some of the variability in response commonly noted in patients receiving coumarin-type drugs.

The mechanism of the interfering effect is obscure, although a barbiturate-induced increase in activity of coumarin-degrading enzymes has been suggested.^{3, 6} Sedation itself probably plays no role since glutethimide, a nonbarbiturate hypnotic, does not appear to affect coumarin activity.¹ The minimal amount of barbiturate necessary to induce the phenomenon is not known, nor is there available information about the duration of effect once barbiturates are discontinued.

The extent to which prolonged high-dosage administration of bishydroxycoumarin may be able to overcome the inhibiting effect of phenobarbital requires further investigation. A predictable response without much fluctuation of prothrombin levels is desirable when coumarin-type drugs are administered. It appears reasonable, therefore, that barbiturates be discontinued in patients who exhibit suboptimal or erratic response to this form of anticoagulant.

Summary

The effect of phenobarbital on patient response to bishydroxycoumarin has been studied. In a group of patients being anticoagulated with bishydroxycoumarin 30 were given phenobarbital concurrently while 19 control patients received no barbiturates. Seventy-two hours after the first dose of bishydroxycoumarin the phenobarbital-treated group exhibited a significantly smaller response to the anticoagulating effect of bishydroxycoumarin as measured by changes in mean prothrombin time and mean prothrombin level. In comparison to the control patients, a large proportion of the phenobarbital-treated patients failed to attain a clinically desirable state of anticoagulation. It is concluded that barbiturates sometimes interfere with the anticoagulating activity of coumarin-type drugs and should be discontinued in patients who demonstrate a suboptimal or erratic response to this form of anticoagulant.

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(Continued on page 588)

Clinical Evaluation of the Antihypertensive Effects of Debrisoquin, a New Postganglionic Vasodepressor Agent

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REPORTS OF DEBRISOQUIN*, a new antihypertensive drug—3,4-dihydro-2(1H)-isoquinoline carboxamidine—indicate that it is a potent hypotensive agent.¹⁻⁵ Preliminary clinical trials^{2, 3, 4} appear to confirm the pharmacologic evidence¹ that the drug acts by producing postganglionic sympathetic blockade. Abrams⁴ reported that debrisoquin appears to possess considerable potency in lowering blood pressure, relatively prompt onset and short duration of action, low toxicity potential, and the desirable mechanism of postganglionic sympathetic blockade without catecholamine depletion. In evaluating the clinical effectiveness of debrisoquin Finnerty⁵ reported that the drug has a more rapid onset of action than guanethidine. With the development of postural hypotension in patients treated with debrisoquin, withdrawal of the drug resulted in return of arterial pressure to control levels within a 12-hour period.⁵ This is in contrast to the duration of hypotensive episodes that occur with guanethidine. In another clinical trial, Hurowitz et al² reported that debrisoquin possesses potent antihypertensive properties and that the average duration of hypotensive effects following administration of single doses was 14 hours.

Material and Method

In the present report the antihypertensive effects of debrisoquin were evaluated in 30 hypertensive patients (16 males and 14 females) who were treated for periods up to 15 months. There were 11 private patients and 19 clinic patients. All of the private patients were white and all of the clinic patients were Negro. The Casualty Hospital Cardiac Clinic, Washington, D.C. was the source of all clinic patients who participated

in the study. The average age of the patients was between 40 and 50 years, with ages ranging from 25 to 72 years. All were ambulatory with the exception of 3 patients who were hospitalized during part of or the entire study period. Diagnoses included benign hypertension in 26 patients, malignant hypertension in 2, renal hypertension in 1, and pheochromocytoma in 1. Twenty-three patients had other disorders including arteriosclerotic heart disease, heart failure, diabetes mellitus, pyelonephritis, postcerebral vascular accident, obesity, gastric ulcer, hypertensive encephalopathy, and post-thyroidectomy. Patients had been hypertensive for up to 31 years, and in 17 patients the disorder had been present for 5 or more years. All but 3 patients had received antihypertensives previously including chlorothiazide, bendroflumethiazide, reserpine, hydrochlorothiazide, hydralazine, guanethidine, and others.

Initial daily dosage of debrisoquin ranged from 20 to 80 mg., with 20 patients receiving 40 mg. per day initially. Dosage was adjusted as necessary during the study period. The drug was administered orally in all patients. Total daily dosage ranged from 10 to 400 mg. per day. The most effective daily maintenance dose was 40 mg. or less in 6 patients, 41 to 80 mg. in 13 patients, 81 to 120 mg. in 6 patients, and over 120 mg. in 5 patients. Two patients received other antihypertensive drugs concurrently during part of the study period: quinethazone was administered to 1 patient, and a combination of reserpine, hydralazine, and hydrochlorothiazide was administered to the other. Duration of debrisoquin therapy ranged from 1 to 15 months, and 23 patients received the drug for 5 months or longer. Blood pressure was recorded prior to therapy and at varying intervals during the study period (at approximately monthly intervals in most patients).

* Dechnax®, a product of Hoffmann-La Roche, Inc., Nutley, N. J.

Laboratory tests were performed during therapy in all patients and before therapy in all but 2 patients. Tests performed included urinalysis, complete blood count, blood urea nitrogen (BUN), SGO-T, alkaline phosphatase, hemoglobin, and hematocrit. BUN and SGO-T determinations were done before and during therapy in most patients. Not all other tests were performed in all patients.

In order to determine blood pressure changes resulting from debrisoquin therapy an average of the 2 final blood pressure readings taken at least 1 month apart or an average of the readings taken during the final month of treatment was compared with pretherapy readings. Pretherapy readings used for comparison consisted of 1 reading (when only 1 was taken) or the average of 2 readings taken prior to the administration of debrisoquin. Evaluation of results was based on the degree of hypertension prior to therapy, the extent of drop in blood pressure (both systolic and diastolic in the standing and supine positions), and on the occurrence and severity of side-reactions. Responses were rated as excellent, very good, good, fair, and ineffective.

Results

Pretherapy and final blood pressure readings (as described above) are summarized in table 1. The degree of blood pressure increases and

TABLE 1: Blood Pressure Recordings Before and During Therapy with Debrisoquin

B.P. (mm. Hg)	PRETHERAPY* No. Patients		B.P. (mm. Hg)	DURING THERAPY* No. Patients	
	Supine	Standing		Supine	Standing
Systolic					
<150	0	1	<150	3	5
150-180	5	5	150-180	11	10
181-210	12	11	>180	13	12
>210	10	10			
Diastolic					
<90	1	0	<90	2	1
90-110	15	16	90-110	21	21
111-130	8	7	>110	4	5
>130	3	4			

* Readings not tabulated in 1 patient whose blood pressure was not recorded over a 1-month period and in 2 patients who died during therapy.

decreases (mm. Hg) following debrisoquin treatment is presented in table 2. Overall re-

sponse to treatment was rated as excellent in 5 patients, very good in 8, good in 5, fair in 4, and ineffective in 8. These response ratings and corresponding ranges of blood pressure changes are shown in table 3.

Side-effects attributable to the administration of debrisoquin occurred in 9 patients, as shown in table 4. Side-effects caused by hypotension were observed in 11 patients and included dizziness, loss of balance, blackouts, light-headedness, and lack of energy. These

TABLE 2: Changes of Blood Pressure Following Debrisoquin Therapy

B.P. Drop (mm. Hg)	SUPINE No. Patients	STANDING No. Patients
Systolic*		
0-10	6	3
10-20	3	7
20-30	4	5
30-40	2	1
40-50	4	4
50-60	3	2
60-70	2	2
70-80	1	
80-90		1
B.P. Increase (mm. Hg)		
0-10		1
10-20	1	
20-30	1	1
Diastolic*		
0-10	6	7
10-20	6	7
20-30	6	4
30-40	3	4
40-50	1	1
B.P. Increase (mm. Hg)		
0-10	1	3
10-20	4	1

* Readings not tabulated in 1 patient whose blood pressure was not recorded over a 1-month period and in 2 patients who died during therapy.

reactions were readily reversible by dosage reduction. There were no untoward reactions resulting from the combined administration of debrisoquin and other antihypertensives.

Laboratory studies revealed no abnormalities indicative of a serious disturbance of bodily structure or function. Hemoglobin levels below the normal value noted in certain patients reflected the nutritional problems of this economically underprivileged group of patients.

TABLE 3: Summary of Responses and Ranges of Blood Pressure Changes Following Debrisoquin Treatment

Range of Blood Pressure Changes (mm. Hg)

[Increases (+) and Decreases (-)]

Response	No. Patients	SUPINE		STANDING		SIDE-EFFECTS No. Patients
		Systolic	Diastolic	Systolic	Diastolic	
Excellent	5	-20 to -70	-20 to -40	-23 to -83	-10 to -40	2
Very good	8	0 to -60	+15 to -33	-12 to -53	+3 to -32	6
Good	4	-2 to -60	+10 to -25	0 to -47	+10 to -25	1
Fair	4	-5 to -21	-3 to -30	0 to -63	-2 to -31	3
Ineffective	6	+30 to -16	+18 to -11	+23 to -15	+7 to -15	3
Good	1	Not tabulated (blood pressure not recorded over a 1-month period).				0
Ineffective	2	Not tabulated (both patients died during therapy).				1

One patient in this series, a 47-year-old man, is of distinct interest, because the patient was ultimately found to have a pheochromocytoma. Findings of a left upper quadrant mass were first suspected to be a pancreatic cyst, and surgery was performed for its removal. A diagnosis of pheochromocytoma was not suspected preoperatively, and the adrenal tumor was not recognized until toward the end of surgery when with its removal the patient went into irreversible shock and died. The pathologic report showed pheochromocytoma. Although contraindicated in pheochromocytoma, debrisoquin provided adequate reduction in blood pressure with no untoward reactions in this patient. Dosage ranged from 40 mg. to 120 mg. per day, and the duration of therapy was 1 month.

One patient in whom the response to debrisoquin was particularly dramatic was a 50-year-old male patient with malignant hypertension of 6 years' duration whose pretherapy blood pressure was so high that it could not always be read by the usual type of blood pressure apparatus. On one occasion systolic pressure was at least as high as 300 mm. Hg. The patient had also had episodes of hypertensive encephalopathy and had received various antihypertensive medications previously, including reserpine, hydralazine, chlorothiazide, mecamylamine and others. Dosage of debrisoquin ranged from 40 mg. to 400 mg. per day, and duration of therapy was over 6 months. Despite the occurrence of fatigue and slight diarrhea from the medication, response in this patient was excellent. Average systolic blood pressure during therapy with debrisoquin was 195 mm. Hg in the supine position and 175 mm. Hg in the standing position. Average diastolic pressure during therapy was 110 mm. Hg in the supine position and 109 mm. Hg in the standing posi-

tion. Despite the administration of massive doses of the drug there were no toxic effects on any organ and side-effects that did occur were not serious.

TABLE 4: Summary of Side-effects Due to Debrisoquin

SIDE-EFFECT	NO. PATIENTS
Diarrhea	3
Dizziness	2
Sexual disturbances	2
Difficulty focusing eyes	1
Headache	1
Maculopapular rash	1
Night sweats	1
Urinary frequency	1
Fatigue	1
Lightheadedness	1
Weakness	1
Mental confusion	1
Fainting spells	1

Another patient with malignant hypertension died in severe congestive heart failure after having received debrisoquin for 11 months. This patient had severe hypertensive cardiovascular renal disease and was in incipient failure during most of the study period. Response to debrisoquin was not good. It was not my opinion, however, that the drug administration was related to this patient's congestive failure and death.

Discussion

Judging from the clinical data of the present study, debrisoquin appears to be a potent antihypertensive agent, particularly suited for the moderately severe to severe hypertensive individual. Clinically the drug appears to be comparable to guanethidine, although extensive clinical

cal testing will be necessary before its ultimate therapeutic efficacy and activity in comparison with other antihypertensives can be determined. In preliminary clinical pharmacologic studies with debrisoquin,⁴ there was relatively good preservation of cardiac output in the presence of decreased peripheral vascular resistance, suggesting that the major functional effect of the sympathetic blockade is on arteriolar tone rather than on venous tone.

Debrisoquin proved to be free of serious adverse effects despite its administration in some patients for up to 15 months. The incidence of diarrhea was conspicuously low in this series of patients. Its use in combination with other currently used antihypertensives did not produce any untoward reactions as a result of the combined therapy.

Summary

The antihypertensive effects of debrisoquin were evaluated following oral administration in 30 hypertensive patients. There were 16 males and 14 females who ranged in age from 25 to 72 years. Diagnoses included benign hypertension in 26 patients, malignant hypertension in 2, renal hypertension in 1, and pheochromocytoma in 1. Patients had been hypertensive for up to 31 years, and more than half had been hypertensive for 5 years or longer. All but 3 patients had received antihypertensive medications previously including chlorothiazide, bendroflumethiazide, reserpine, hydrochlorothiazide, hydralazine, guanethidine, and others.

Initial dosage of debrisoquin ranged from 20 to 80 mg. per day. Dosage was adjusted during the study period as necessary. The most effective daily maintenance dose was 40 mg. or less in 6 patients, 41 to 80 mg. in 13 patients, 81 to 120 mg. in 6 patients, and over 120 mg. in 5 patients. Total daily dosage ranged from 10 mg. to 400 mg. Debrisoquin was administered for from 1 to 15 months, and 23 patients received the drug for 5 months or longer. Two patients received other antihypertensive drugs concurrently during part of the study period—quineth-

azone in 1 patient and a combination of reserpine, hydralazine and hydrochlorothiazide in the other.

Response was rated as excellent in 5 patients, very good in 8, good in 5, fair in 4, and ineffective in 8. Average pretherapy systolic pressure was 180 mm. Hg or above in all patients and during therapy was reduced to below 180 mm. Hg in the supine position in 20 patients, and to below 180 mm. Hg in the standing position in 22 patients. Average diastolic pressure, which was greater than 110 mm. Hg before therapy in 28 patients, was reduced to below this reading in 25 patients in the supine position and in 26 patients in the standing position.

Side-effects which occurred from the administration of debrisoquin occurred in 9 patients and included diarrhea, dizziness, sexual disturbances, headache, maculopapular rash and others. Side-reactions caused by hypotension occurred in 11 patients and were readily reversible by dosage reduction. Laboratory studies revealed no abnormalities indicative of a serious disturbance of bodily structure or function.

Judging from this preliminary clinical trial, debrisoquin appears to be a safe and potent antihypertensive, particularly suited for the moderately severe to severe hypertensive individual. In view of its apparent safety and potent hypotensive activity further clinical testing with this compound seems indicated.

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Prediabetes and Pregnancy

Report of a Case

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THE PURPOSE OF THIS PAPER is to remind all physicians doing obstetrics of a well substantiated medical fact that prediabetes and pregnancy is a significant combination.¹ Furthermore, under the influence of pregnancy the prediabetic state can be diagnosed quite easily if suspicion is high. For our purpose prediabetes can be defined as the earliest time at which diabetes is suspected. It can be diagnosed by clinical test before a definite diabetic glucose tolerance curve is consistently obtained.² Ordinarily this is a symptomless state but, as will be shown, certain signs in the case of pregnant women should suggest the possibility of this condition.

Prediabetes is a poor term.^{2,3,4} If one accepts the fact that diabetes mellitus is an inherited disease, prediabetes could be defined as the period of time from union of the diabetogenic genes until the classical clinical signs, symptoms and laboratory findings appear. If this is so, any hyperglycemic tolerance curve in the pregnant patient who sometime later develops overt diabetes was indicative of diabetes. Thus, prediabetes is a retrospective diagnosis. However, all patients with an abnormal curve in pregnancy do not develop overt diabetes. Many abuses of the term "prediabetes" have appeared in the literature. For our purpose it is sufficient to understand only that abnormal hyperglycemic glucose tolerance curves can be obtained in a high percentage of pregnant women with certain historical criteria. If this metabolic defect is combined with a history of high perinatal loss, the patient and her unborn infant can be benefited by enlightened management.

When should the obstetrician look for the prediabetic state in one of his patients? The following criteria are significant and suggestive:

1. Family history of diabetes
2. Oversized infants
3. Repeated glycosuria during pregnancy

4. Previous unexplained stillbirth or neonatal infant death

5. Hydramnios

6. Repeated abortion

7. Toxemia early in pregnancy

8. Furunculosis

9. Obesity.

In our experience the most significant items on this list are family history, large baby, repeated glycosuria, and high perinatal loss. Perinatal loss, hydramnios and repeated abortion can be grouped under the heading of "poor past obstetrical history." Furunculosis and obesity are nonspecific findings but should make any physician suspicious of abnormal glucose metabolism. Special comment is appropriate in regard to the term "oversized infants." One should become suspicious of latent diabetes when a term infant weighs over 4,000 Gm. (8 pounds, 14 ounces) or when a delivery at 32 weeks produces a 3,000 Gm. (6 pounds, 10 ounces) infant. The significant thing is that when a baby is oversized (arbitrarily selected at 4,000 Gm. for the term infant) one's curiosity should be aroused.

Report of a Case

Mrs. A. K., a 33-year-old gravida III, Para 2 came under our care on July 10, 1961. She had had no significant illnesses, but had had a resection of a left ovarian cyst and appendectomy in 1953. She had had a complete history and physical examination in June of 1960. At this time her chief complaint was that of obesity. The laboratory data included a normal hemogram, normal urinalysis, and a fasting blood sugar of 123 mg. No further investigation was conducted. An electrocardiogram showed flat T waves over the left precordium. These changes were interpreted as being nonspecific and relatively insignificant. The patient's height was 64½ inches, her weight 197½ lbs. The blood pressure was 120/80. On a low-calorie diet, aided by anorectic agents, she was able to reduce her weight over a 6 months' period to 175 lbs.

The family history was significant. The father had died at age 72 of cardiac and peripheral vascular complications secondary to diabetes. The obstetrical history included delivery in 1953 of a 4,300 Gm. (9 pounds, 8 ounces) male infant after 72 hours' labor and a "difficult delivery." In 1954 the patient delivered a 4,300 Gm. (9 pounds, 8 ounces) male infant after 48 hours of labor.

When she reported to us on July 10, 1961 her weight was 189¾ lbs. In spite of repeated precautionary reminders she gained 17½ lbs. during the remainder of her pregnancy. The 18 urine checks throughout pregnancy were always negative for both sugar and albumin. The blood pressure varied between 110/70 and 130/80 except for 1 reading at 36 weeks of 150/90. At this time her weight was 209½ lbs. She was placed on chlorothiazide and phenobarbital. In 2 days her pressure had dropped to 135/90 and her weight was down 2 lbs. In view of the family history, signs suggestive of impending toxemia at 36 weeks, and the fact that her 2 babies had both weighed in excess of 4,000 Gm., she was given a glucose tolerance test. The fasting blood sugar was 123 mg; at ½ hour it was 215 mg., at 1 hour 227 mg., at 2 hours 215 mg., and at 3 hours 196 mg. Urine specimens obtained at the time of each blood sugar were all negative for sugar and acetone. The complete absence of glycosuria during pregnancy in the face of an abnormal glucose tolerance curve deserves special mention. It indicates that one cannot make glycosuria a necessary sign before ordering the test. A high renal threshold for sugar is misleading in these cases.

The patient was seen at intervals of 3 to 4 days. Her weight varied between 206¼ and 207½ lbs. Her blood pressure varied between 130/85 and 140/90. On February 12, 38 weeks' gestation by date, the vertex was well engaged. The cervix was 70 per cent effaced, 1 cm. dilated, and the presenting part at -1 station. The membranes were stripped and they knuckled into the cervix quite well. She was sent to the hospital for induction on the morning of February 13, 1962. This was carried out by amniotomy and infusion of 1/2,500 I.V. Pitocin®. She had a 4½-hour labor and normal spontaneous delivery of a 4,200 Gm. (9 pounds, 4 ounces) male infant. The neonatal period of the infant and the puerperium of the parturient also were without incident.

Discussion

What is the significance of the prediabetic state? Probably the greatest significance lies in the implications to the fetus. Drs. Carrington, Reardon and Shuman⁵ who have studied this problem at Temple University estimate that the perinatal loss in the last 5 years preceding true diabetes is approximately 30 per cent. Considering this figure as opposed to a normal anticipated perinatal loss of 3.5 per cent in white

and 5.8 per cent in nonwhite individuals⁶ makes an awareness of prediabetes mandatory. The pathologic findings on these infants, when they fail to survive, reveal hyperplasia of the pancreatic islets, plus occasional disturbances in the hemopoietic system and also hyalin membrane disease.

One can diagnose the prediabetic state by performing glucose tolerance tests ideally during pregnancy. Pregnancy, perhaps due to an increase in the 17-hydroxycorticosteroids, affects the glucose metabolism so that glucose tolerance tests result in diabetic curves in individuals with prediabetes. In these same patients a glucose tolerance test repeated more than 48 hours postpartum will be normal approximately 80 per cent of the time.³ If the glucose curve remains abnormal after pregnancy the patient is a true diabetic. Because the glucose tolerance test is so affected by gestation some investigators¹ have recommended that the test be repeated in each trimester of pregnancy, particularly if the incidence of suspicion is high. This has not been our policy, but if any of the above indications of a patient at risk are present we endeavor always to do a glucose tolerance test during the third trimester when the hormonal changes associated with gestation are at their peak. Occasionally the possibility of latent diabetes has not occurred to us until the time of delivery. On such occasions we have attempted to do this test within the first 24 hours postpartum. The results of 2 of these studies can be seen in table 1. Note that these 4 cases

TABLE 1: Glucose Tolerance Studies in Pregnancy

CASE INFOR- MATION	INDICATIONS	WHEN DONE	RESULTS— Blood Sugar mg. per cent	URINE	
				Sugar	Acetone
10-16-61 B.O.K. 29 γ 4 p2	4,300 Gm. infant	8 hours post partum	Fasting 110		
			½ hr. 156		
			1 176		
			2 210		
			3 188		
12-1-61 R.E. 28 γ 5 p3	4,400 Gm. infant; past OB history	29 weeks gestation	Fasting 104	0	0
			½ hr. 178	0	0
			1 183	0	0
			2 173	1+	0
			3 158	0	0
1-9-62 D.C. 25 γ 2 p1	4,500 Gm. infant	6 hours post partum	Fasting 78	0	0
			½ hr. 150	0	0
			1 184	0	0
			2 179	2+	0
			3 116	3+	0
2-1-62 A.K. 33 γ 3 p2	4,300 Gm. infant; family history; toxemia	37 weeks gestation	Fasting 123	0	0
			½ hr. 215	0	0
			1 227	0	0
			2 215	0	0
			3 196	0	0

cover only a 3½-month period, indicating the relatively high incidence of this combination.

What are the criteria for diagnosing prediabetes or, perhaps better, abnormal glucose metabolism in pregnancy? This diagnosis can be made if the fasting blood sugar is over 130 mg., or if the 2-hour blood sugar has not returned to below 120 mg.

What special treatment should be recommended for these individuals once the diagnosis has been made? Opinion is divided in regard to this matter.^{1, 2, 5} We favor more stringent observations and restricted weight gain; otherwise these patients are treated as any normal nondiabetic pregnant woman with the exception that we elect to induce labor as soon as it is obstetrically feasible if it is evident that the infant is becoming quite large or when there is a history of intrauterine or neonatal fetal loss. This was the policy that was followed in the case reported. As far as the infants are concerned, routine aspiration of the stomach is performed in order to try to decrease the incidence of hyalin membrane disease. Also, an attempt is made to have the pediatrician alerted and on hand at the time of delivery.

What benefits can be gained from an ever-watchful eye for the existence of prediabetes? A brief summary of the experience of the Temple group is most enlightening. Seven hundred and ninety patients were studied. There were 111 who had normal fasting blood sugars but whose 2-hour readings were above 120 mg. A review of the obstetrical experience of these patients, representing 14 per cent of the total population examined, indicated that 30 per cent had experienced previous fetal loss and 40 per cent were delivered of infants over 4,000 Gm. To further point up the significance of this condition, 39 of the 111 prediabetics ultimately diagnosed were not recognized as such until after delivery. In these 39 unrecognized and untreated individuals the perinatal mortality rate was 25.6 per cent, whereas in the recognized and treated group it was 2.9 per cent. Hurwitz and Higano⁷ emphasized that this high perinatal loss exists 5 years before the actual onset of diabetes.

Thus, the benefits to be gained by the fetus are clearly evident. Not to be forgotten is the

additional benefit to the parturient who can be made aware of a most significant metabolic disorder, perhaps several years before any of its highly undesirable medical complications have become established. In this area our internist friends would remind us of 2 important medical facts frequently encountered in an obstetrical population: 1. Obese patients with hyperglycemia often have normal glucose tolerance on reducing weight. The abnormal accumulation of fat in the liver interferes with its capacity to lay down glycogen at the normally rapid rate.⁸ 2. Diabetes may be precipitated by thiazides given to a patient with the hereditary predisposition.⁹ Finally, from experience we can say that this is a most appreciative patient.

Summary

Prediabetes and pregnancy are a significant combination. This combination of conditions is easily diagnosed if suspected. Once one recognizes the existence of this combination, real benefit can be offered to the patient and her fetus.

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Training for Community Psychiatry

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THE RAPIDLY EXPANDING FIELD of community mental health is currently necessitating a revision in the curriculum for psychiatric training. Increasingly, social problems such as dependency, delinquency, poverty and criminal behavior are seen as involving significant emotional components. Community psychiatry is the application of sound psychiatric principles to mental health problems within the community. In addition to treatment, community psychiatry emphasizes primary prevention and rehabilitation in approaching the mentally ill and their families.

What place does the newly burgeoning field of community psychiatry have in an already overburdened residency training program? Traditionally, psychiatric residency stresses the broad acquisition of psychodynamic principles with particular emphasis on the acquisition of skills and knowledge pertinent to individual psychotherapy. How to widen the resident's awareness to encompass the broad social implications of emotional illness is a major task. This is especially important since knowledge of the cultural, environmental, educational, and socioeconomic levels is often of key importance in acceptance or nonacceptance of patients in individual psychotherapy.

Community psychiatry, though new in the curriculum, has special relevance for several reasons: (1) The passage of the Community Mental Health Center Act (1963) spurred by the report of the Joint Commission on Mental Illness (1961) has given tremendous impetus to the field; (2) increasing numbers of psychiatrists going into private practice will be available for part-time consulting work, thus providing "indirect services" to schools, courts, agencies, etc.; (3) the number of psychiatric units in general hospitals is expected to expand very rapidly during the next 5 to 10 years.

In a field so new and vast as community psychiatry, what goals are paramount in a university teaching program? In essence, they are 3-fold: (1) to increase the knowledge and understanding of broad socioeconomic factors in relationship to

emotional illness; (2) to motivate an open-minded, flexible approach to psychosocial problems; and (3) to provide actual clinical experience through a field-placement rotation. The teaching of community psychiatry must necessarily stress educative and consultative aspects with special emphasis on prevention.

The teaching of social factors in relationship to emotional illness can be enhanced by the development of a "core content" curriculum in community psychiatry. Topics of great significance should include techniques of individual and group consultation, community organization of psychiatric facilities, social psychiatry, theory and technique of group processes, techniques of brief therapy, epidemiology of mental illness, etc. Many additional topics might be equally pertinent. This knowledge may be disseminated by informal seminars, conferences, and readings as well as by more formal lectures. By far, however, the most meaningful aspect of the resident's training will involve clinical experience in field work in a community setting, such as social agency, court, or school. Field placement will help provide a supervised training experience while allowing the resident to develop his own unique talents and capacities for leadership away from the training center. Under no circumstances should the field placement experience be a duplication of the resident's outpatient clinical experience. Field placement will also provide much needed "indirect" community service to judges, social workers, teachers and probation officers.

Cultivation of an objective attitude toward psychologic problems will help the resident to obtain necessary perspective. The more understanding he has of the patient's environment, the more flexibility will be used in recognizing the aims and limitations of psychiatric treatment techniques. An objective attitude will help him avoid the extremes of therapeutic optimism on the one hand and undue pessimism on the other.

A curious resident will be able to ask many questions and to learn much of the particular community facility to which he serves as con-

sultant. Some significant questions might include: What is the relationship of the agency to the rest of the community facilities? What are the primary social problems confronting the agency? What methods have been used to deal with the social problems on individual or group basis prior to psychiatric consultation? How effective have the agency's services been? What are the respective role relationships of case worker, supervisor, and psychiatrist? Opportunities may also be available for in-service training and selected groups for lectures, case presentations, and individual case consultations, as well as providing direct psychiatric service.

Development of effective community psychiatric programs raises many assumptions: To what degree are social problems such as delinquency, poverty, criminal behavior, and illegitimacy influenced by concomitant emotional factors? Are treatment techniques currently available to cope with these manifold problems? What will be the specific role of the psychiatrist in community programs? Does he not run the risk of shifting his clinical skills and knowledge, a role primarily as a clinician, to that of community organizer, whose job can be better done by appropriate professionals? It seems quite apparent that individual psychotherapy has not and cannot meet the mental health needs of the community. Newer techniques, such as group therapy, family group therapy, and crisis intervention, have particular relevance here.

Many additional questions in this new field remain. Is there justification for viewing the field as a subspecialty requiring additional training? What is the relationship of community psychiatry to the proposed community mental health centers? Should training in the residency be elective or mandatory? What is the proper balance between training in theoretical concepts versus practical field experience? Only further experience with an appropriate passage of time can effectively answer these questions.

An experience in community psychiatry of at least 1 day per week over a 6-month period would appear to be of great value in supplementing the resident's psychiatric training. Such an addition to the program would seem most suitable for the third-year residency after sufficient general psychiatric experience has been acquired. Special opportunities may also be available to the resident for group therapy and for psychosocial research according to individual interests. Training should be adequately supervised with proper liaison between the particular agency, court or school, and the training institution.

Additional learning experiences may also contribute to legitimate training methods in social psychiatry, but some of the above outlines can constitute a sound basis for further growth and development in a rapidly developing field.

Acute Aortic Dissection—Tawakkol and Bacos

(Continued from page 573)

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Inhibition of Bishydroxycoumarin Activity— Corn and Rockett

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PRESIDENT'S PAGE

THE UNIVERSALITY OF MEDICINE



STIMULATED BY THE ARTICLE in the October issue of *The American Heritage* concerning Leif Ericson's documented discovery of North America, I chose as the main theme for my last "Page," the universality of medicine. I am certain a medicine man was aboard Leif's long boat, because these primitive people did not wander without their doctor who was then as now more than a dispenser of medications. Columbus was certainly accompanied by several skilled in the then known arts of our profession.

Our own species of primitive men evolved upon our world about 50,000 years ago while there were still Neanderthal types in existence. Our ancestors had medical men. There were trade routes through Euro-Asia which had to do with flints, flint-chipping techniques, amber, and particularly medicinal herbs.

Many of our early tribal groups were land- and valley-locked and inbred for thousands of years without any evidence of communication except trading in charms, herbs and incantations. Disease and death were constant, early and feared visitors of our predecessors. The "healer" was accepted as quickly as the wandering storyteller. Later, Egyptian, Greek, Hebrew and Arabic doctors intermingled and crossed geographic and cultural boundaries with general acceptance. In the Middle Ages the medical schools of Italy, France, England and the Arabic lands attracted medical students from all over the existing world.

Our own early medical greats—Rush, Warren, Morgan and their followers—studied in Europe despite current adverse nationalistic and political feelings. Such English colleagues as John Locke, John Keats and Tobias Smollet benefited from similar experiences. American Indian tribes interchanged information through medicine men although an occasional one and some of our own medical settlers were burned at the stake by hostiles.

Early in our own century there was an eastward drift to the medical centers in central Europe, such as Vienna and Berlin. Since World War II, for many obvious reasons, the trend has been reversed.

The Evening Star of Wednesday, October 13, 1965 titled an article "U. S., Russia to Share Space Medicine Data." This agreement was reached by these countries despite their completely diverse ideological concepts of individual freedom, self-determination, free enterprise, religion, sociology, ethics, morals, and national pride and interests. However, disease knows no political boundaries.

Perhaps medicine must lead the way to understanding and permanent peace in a world which is too, and yet again not enough, civilized to accept the teaching we doctors would like to offer. I'll never forget the War pictures of American and other medical men, of diverse backgrounds, treating children in an enemy's homeland. The great examples of HOPE, Medico, courageous missionaries of various backgrounds, and the World Health Organization continually demonstrate our motivation toward total world-wide health care. Such is the universality of medicine.

Paul R. Wilson

Intragastric photography studies¹



A/ E. B., male, age 48. Normal antral contraction. Pyloric opening is not seen. It is difficult to differentiate a deep prepyloric contraction from a "pyloric fleurette" or true pylorus.

B/ Same subject after 6 mg. of propantheline bromide intravenously; antral contractions ceased. The pyloric orifice remained open and was easily identified. Better visualization of the antrum was also obtained.



Now you can see Pro-Banthine[®] at work (propantheline bromide)

Pro-Banthine is so effective in anticholinergic action that it may be employed in visualizing the entire pyloric region.

In addition to the intragastric photographs, cinegastroscopic studies² have demonstrated graphically not only its effectiveness but the superiority of Pro-Banthine over belladonna alkaloids.

Pro-Banthine produced complete cessation of gastric, antral and pyloric motor activity with a dose of 6 mg. intravenously. This is approximately one-third the usual oral dose of 15 mg.

Atropine at full normal dosages did not produce such cessation. It required double the usual oral dose of atropine, 0.8 mg. intravenously, to duplicate the aperistaltic action of Pro-Banthine. This dose of atropine produced pronounced discomfort and tachycardia with ventricular rates as high as 150 per minute.

It is this pharmacologic superior-

ity of Pro-Banthine which has made it the most widely prescribed anticholinergic in such conditions as peptic ulcer, functional hypermotility, irritable colon, pylorospasm and biliary dyskinesia.

Dosage—The maximal tolerated dosage is usually the most effective. For most *adult* patients this will be four to six 15 mg. tablets daily in divided doses. In severe conditions as many as two tablets four to six times daily.

Side Effects and Contraindications—Urinary hesitancy, xerostomia, mydriasis and, theoretically, a curare-like action may occur. The drug is contraindicated in patients with glaucoma or severe cardiac disease.

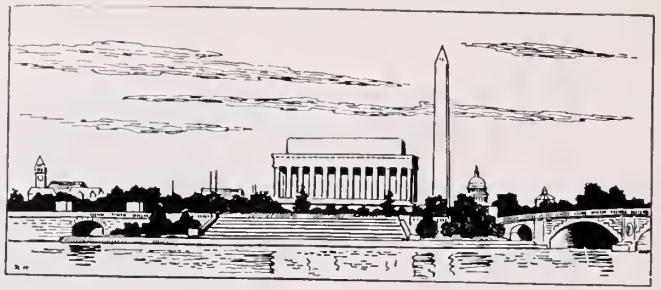
Pro-Banthine (brand of propantheline bromide) is supplied as tablets of 15 mg., as prolonged-acting tablets of 30 mg. and, for parenteral use, as serum-type ampuls of 30 mg.

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SEARLE

Research in the Service of Medicine



EDITORIALS

The Festival Season of Light

FOR 8 DAYS ending on December 25 the children of the faith of Israel will celebrate Hanukah, the Festival of Light, to remember the heroism of the Maccabees, who, more than 2,000 years ago, fought for religious liberty against pagan tyranny. It was their struggle against the forces of cruel darkness that made it possible for our sages to keep burning the flame of our ancient faith on the altar of Israel. It was the torch raised high by these stalwart Maccabees of ages past that blazed the trail of light for the coming of Christianity. If not for their spiritual strength and sacrificial struggle and rededication, as they faced the forces of religious decadence within and intolerance without, the vision of the democratic state of free men would never have been born.

As our Christian neighbors gather on Christmas Day to turn their souls in prayer before the altar of Almighty God our hearts are joined with them in the quest for peace on earth for men of good will; and our lives are reconsecrated with the fellow citizens of this blessed land in the will for the good that makes possible a world of good will. We pray for God's blessing to the Christian

churches of our community and to all of the Christian faith everywhere who have faced the oppressor without appeasement; who have befriended the innocent from mankind's malevolence; who have truly shared the world's sorrow and who have been the living witness of our common faith: "To do justly, to love mercy and to walk humbly with thy God."

May our prayers unite us, Christian and Jew, in this festival season of light, so that we will stand together, as free citizens of this good land, the hope of the world, to raise high a sacred torch to dispel the darkness. Now that God in His wisdom has swept mankind into the orbit of a tiny community so that even the blind can see that all men on the face of the earth are neighbors, we pray that He shall give us the strength to rise to a great covenant of righteousness so that the individual man everywhere shall have his divinely endowed, inalienable rights guarded by neighbors who will live as brothers.

NORMAN GERSTENFELD, D.D.

Rabbi of the Washington Hebrew Congregation

Humility—the Physician's Greatest Attribute*

THE YEARS HAVE COME UPON ME so easily and so rapidly that I can look back on each and every one without regret. The older man is not always able to see the necessity or perhaps the justice of his decline and resents his slipping from the high position he may have held, instead of peacefully and gently softening this passing by assisting and giving of what knowledge he has acquired through the years to the younger men. Each day, as I meet

these young men in my daily rounds through the hospitals, I am strengthened and elevated by their initiative, their dreams, and their quest for knowledge in order that they may become better physicians. All I can give them now are the fruits, if any, of my long experience. In the long run, I get much the better of the exchange.

There are many blessings that come with age, and if one has the proper perspective and outlook on life he will look ahead to a future full of interest, beyond the power to describe, and with the full understanding that it is for each generation to solve the problems that confront it, and that no

* EDITOR'S NOTE: This is a portion of the address Dr. Sanderson delivered at his installation into honorary membership in the Washington Medical and Surgical Society, April 26, 1965.

man, how great, has the wisdom to guide or control the generation to come.

To become a good doctor one must possess the knowledge of many subjects pertaining to medicine and be well trained in the branch of medicine he intends to practice. But besides these, there are other attributes which he must possess in order to deal intelligently and successfully in treating human ailments, both physical and emotional. There should be kindness, understanding, and insight into the patient's thoughts and feelings. Above all, he should be charitable in his ministrations to the sick of body and mind.

But to me, the greatest attribute a doctor can possess, other than his knowledge of the causes, diagnosis, and treatment of disease, is the virtue of humility. No matter how great he is held in esteem by his colleagues for the attainments in his special field, no matter to what heights he has risen in his profession, no matter how many honors have been bestowed upon him by societies

and universities, if there is not in his character the quality of humility, then to me he is a sad failure. Surely a humble practitioner who serves his patients faithfully, with understanding and compassion, is preferable to the proud physician or surgeon who is occupied by his own feelings of superiority and greatness. The latter may know all that is to be known about his chosen specialty, but if he has not charity he is just fooling himself. A man should never be too proud of his own superior ability in a field of science in which he excels but rather let the knowledge given him be put to good use, and in the end it will make him a better man. Vanity and pride in any man detract from the greatness toward which he strives. Hence, the best example of a truly dedicated doctor is not only one who adheres to the highest standards of which he is capable but who also exhibits a deep spirit of reverence toward the person and the dignity of the patient.

FRED R. SANDERSON, M.D.

Report on Trauma*†

Early Management of the Crushed Chest

THE SO-CALLED CRUSHED CHEST is most frequently seen in automobile accident victims who are thrown against the steering wheel but may occur following any blunt injury to the chest. Multiple rib fractures produce an instability of the chest wall resulting in paradoxical respiratory movements. This is frequently accompanied by traumatic pneumothorax and/or hemothorax.

The early management of this injury is directed toward:

1. Maintenance of an open airway
2. Stabilization of chest wall
3. Complete expansion of both lungs.

These resuscitative measures should be done in the acutely ill patient before undertaking X-rays and other investigative studies as the need for these measures can be determined by clinical signs alone.

1. Maintenance of an open airway is most

surely accomplished by tracheotomy, best done through a median longitudinal incision in emergencies. Tracheotomy not only overcomes the resistance and dead space problems in the oropharynx but also allows for aspiration of the tracheobronchial tree with catheter suction.‡

2. Stabilization of the chest wall is helped considerably by the above-mentioned tracheotomy. The pain of the rib fractures is reduced by multiple intercostal nerve blocks with Xylocaine®. These blocks are repeated as frequently as necessary and can be complemented by the judicious use of morphine given intravenously in small doses. Such relief of chest wall pain diminishes paradoxical movement and also allows for more adequate cough and ventilation. Rarely is external suspension of the sternum with wires or towel clips necessary if the above measures are carried out. There is no place for adhesive strapping of the crushed chest.

3. Complete expansion of both lungs must be assured at all times. Hemothorax is treated by needle aspiration of the blood. If necessary this blood can be collected (in the acute phase) in citrated bottles and used for autotransfusion. Pneumothorax can be controlled with needle aspi-

* This is the sixth and last of a series of papers concerning Trauma submitted by the North Carolina Chapter of the American College of Surgeons Committee on Trauma. The others appeared in the May, November, December 1964 and the May and October 1965 issues of the MEDICAL ANNALS.

† Reprinted by permission from N. Carolina Med. J., volume 24, no. 8, August 1963. Request for permission was made at the suggestion of Dr. Milton C. Cobey, Chairman, Committee on Trauma, Section III, American College of Surgeons.

‡ See previous article on Tracheotomy, which appeared in the May issue of the MEDICAL ANNALS, page 231.

ration immediately but is better managed by insertion of an intercostal catheter which is connected to an underwater seal.*

Once these resuscitative measures are done, a

* See previous article on Pneumothorax, which appeared in the October issue of the *MEDICAL ANNALS*, page 482.

chest X-ray is taken to evaluate further the intrathoracic situation. Other injuries associated with crushed chest to be considered are myocardial contusion, ruptured spleen or liver, and traumatic diaphragmatic hernia. All but the myocardial contusion require surgical correction.

They Ask Their Bosses

WHEN MEMBERS of the District of Columbia Association of Medical Assistants were asked how they were able to get such excellent speakers for their Annual Scientific Symposium, an all-day program, Saturday, October 30, they replied, "We just asked our bosses." Your Assistant Editor, who accepted an invitation to attend the meeting, was impressed with the caliber of the program and with the enthusiasm of those who attended.

Miss Imogene Warner, President of the Association, introduced the speakers. They and their subjects were: Dr. Ernest A. Gould, President of the Medical Staff of the Washington Hospital Center, "Modern Concepts in the Treatment of Breast Cancer"; Dr. William S. Lyons, of Georgetown University School of Medicine, who used slides to demonstrate "Spare Parts for Human Hearts"; Captain Frank B. Voris, of the U. S. Navy, Bureau of Medicine and Surgery, "Space Medicine"; Dr. Jose Martinez, of Johns Hopkins Uni-

versity School of Medicine, "Nuclear Medicine"; and Dr. Samuel M. Dodek, of George Washington University School of Medicine, "Bedside Placental Localization with Radioactive Isotopes."

How do experts like these relate themselves to modern-day medical assistants? If the program had been broadcast and members had tuned in without hearing the preliminary announcement, they might have asked, "What group of doctors is meeting today?"

Physicians whose employees are not yet members of this organization should encourage them to join for mutual benefit. More and more, informed as well as skilled personnel is a necessity. As a bonus, doctors who do so may be offered an opportunity to address this enthusiastic and attractive group, because these women don't need talent scouts; they just ask their bosses, and it was quite apparent from the October meeting that the bosses were happy to respond.

A. L. E.

Joint Committee on Personal Injury Problems

ARTICLES IN THE PUBLIC PRESS and statements by insurance carriers have alleged that there are instances of collusion between attorneys and physicians in the management of personal injury cases which are detrimental to the reputation of both professions as well as of the individuals involved. To fully discuss the various aspects of this problem, representatives of the District of Columbia Bar Association and the Medical Society of the District of Columbia held a joint meeting on October 28, 1965, at the Sheraton Park Hotel. Those representing the Bar were Messrs. John Arness, J. Joseph Barse and Joseph A. Rafferty, Jr.; Henry Berger was absent. Present to represent the Medical Society were Drs. Samuel Becker, Chairman, Alfred A. J. Den, William T. Gibb, Eugene G. Lipow, and Albert

E. Marland, Sr. Dr. Den was designated Secretary pro tem.

It was unanimously agreed that the present purpose of this new Committee shall be "to receive complaints of the unethical and/or illegal practices of physicians and attorneys in connection with the management of personal injury claims." The Committee shall be purely an investigative body to evaluate and determine the extent of the problem and then report to their respective Societies.

Any complaints against either a physician or attorney regarding his unethical conduct or illegal practices in personal injury claims should be made in writing to the Joint Committee on Personal Injury Problems, Alfred A. J. Den, M.D., Secretary, 1718 M Street, N.W., Washington, D. C. 20036.

Report on an International Symposium on Renal Neoplasia

AN INTERNATIONAL SYMPOSIUM on renal neoplasia was held in Brasilia, Brazil, September 12-15, 1965. This Symposium was sponsored jointly by the Committee on Urology of the National Academy of Sciences-National Research Council and the Bowman Gray School of Medicine. It was made possible by a grant from the Alfred Jurzykowski Foundation.

Dr. Harold W. Glattly, the Secretary of the Section on Urology of the National Research Council, and Dr. William Boyce, Professor of Urology, Bowman Gray School of Medicine, did most of the program planning. An equal number of basic scientists and urologists participated in the conference.

Dr. F. K. Mostofi, of the Armed Forces Institute of Pathology, presented a comprehensive group of slides of renal-cell cancer as related to clinical behavior. Dr. Bryan N. Purser, also of the Armed Forces Institute of Pathology, spoke on diagnostic aids. Dr. William P. Herbst spoke on biochemical cell geography, with practical application of cytochemical staining techniques in research.

Professor of Biochemistry E. Boyland, D.Sc., of the Chester Beatty Research Institute of London, England, spoke on the causes of cancer of the kidney and gave at least 15 chemical etiological factors. Dr. Michele Pavone-Macaluso, of Palermo, Italy, spoke on the same subject.

Dr. Juan A. del Regato of the Penrose Cancer Hospital, Colorado Springs, Colorado, and Professor Patrick Cavanaugh of Duke University Medical Center, Durham, North Carolina, presented data on ionizing radiation therapy which provided reason to feel that such therapy was very effective.

Dr. Marvin Woodruff, of Roswell Park Memorial Hospital, Buffalo, New York, and Dr. H. S. G. Bloom, of the Royal Marsden Hospital of London, England, presented a number of effective chemical therapeutic agents, including provera, testosterone, stilbestrol, prednisolone, and others which had proven to be variably effective in controlling renal malignancy.

Dr. Herbert Brendler, of Mount Sinai Hospital, New York, described his technique of direct arterial perfusion of kidney tumors with chemotherapeutic agents prior to nephrectomy.

The utilization of frogs and hamsters as re-

search animals was described by Dr. Keen A. Rafferty, Jr., of Johns Hopkins Medical School, and Dr. George M. Hass, of Presbyterian St. Luke's Hospital, Chicago, Illinois. Their experiences and observations suggested that utilization of these animals as biological tools should prove to be most valuable in the future.

The utilization of cytochemical staining techniques in studying biochemical reactions in normal and malignant renal cells was described by me with the idea of applying currently available techniques on a community basis in future fundamental biochemical research.

The conference concluded with a list of specific recommendations for further research in the field.

During the conference in Brasilia the President of Brazil, General Castillo Blanco, entertained the participants at a cocktail party and permitted them to see his beautiful palace. The Director of Health and his staff and the Mayor gave a dinner in honor of the participants.

The transactions of this conference will be available at the National Library of Medicine in the near future and deserve the interest of everyone who is engaged in any aspect of research concerning renal malignant disease.

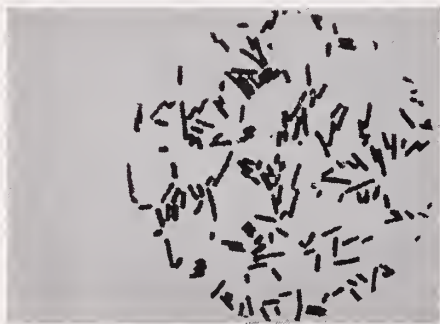
WILLIAM P. HERBST, M.D.

Human Tetanus Immune Globulin Recommended

THE ALLERGY SOCIETY of the District of Columbia, at its meeting, September 30, passed the following resolution:

"Because both equine and bovine antitoxins are hazardous even in persons with negative sensitivity tests, and because there is now available a highly effective human tetanus immune globulin which should eliminate the risk of serum sickness or other allergic reactions, the Allergy Society of the District of Columbia prefers the use of human tetanus immune globulin rather than equine or bovine tetanus antitoxins in those individuals who have sustained wounds, possibly contaminated with tetanus organisms, and where such individuals are not known to have received prior active immunization with tetanus toxoid."

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Gram-negative urinary infection —cystitis, pyelitis, pyelonephritis, prostatitis, urethritis? Start first with NegGram.

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Indications: Urinary tract infections caused by gram-negative and some gram-positive organisms.

Side effects: Mainly mild, transient gastrointestinal disturbances; in occasional instances, drowsiness, fatigue, pruritus, rash, urticaria, mild eosinophilia, reversible subjective visual disturbances (overbrightness of lights, change in visual color perception, difficulty in focusing, decrease in visual acuity and double vision), and reversible photosensitivity reactions. Marked overdosage, coupled with certain predisposing factors, has produced brief convulsions in a few patients.

Precautions: As with all new drugs, blood and liver function tests are advisable during prolonged treatment. **Pending further experience, like most chemotherapeutic agents, this drug should not be given in the first trimester of pregnancy. It must be used cautiously in patients with liver disease or severe impairment of kidney function.** Because photosensitivity reactions have occurred in a small number of cases, patients should be cautioned to avoid unnecessary exposure to direct sunlight while receiving NegGram, and if a reaction occurs, therapy should be discontinued. The dosage recommended for adults and children should not arbitrarily be doubled unless under the careful supervision of a physician. Bacterial resistance may develop.

When testing the urine for glucose in patients receiving NegGram, Clinistix® Reagent Strips or Tes-Tape® should be used since other reagents give a false-positive reaction.

Dosage: Adults: Four Gm. daily by mouth (2 Caplets® of 500 mg. four times daily) for one to two weeks. Thereafter, if prolonged treatment is indicated, the dosage may be reduced to two Gm. daily. **Children** may be given approximately 25 mg. per pound of body weight per day, administered in divided doses. The dosage recommended above for adults and children should not arbitrarily be doubled unless under the careful supervision of a physician. Until further experience is gained, infants under 1 month should not be treated with the drug.

How supplied: Buff-colored, scored Caplets® of 500 mg. for adults, conveniently available in bottles of 56 (sufficient for one full week of therapy) and in bottles of 1,000.

250 mg. for children, available in bottles of 56 and 1,000.

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Health Dept. Notes

The District's Water Supply

Protecting the public water supply is a basic Public Health responsibility.

On the national scale, standards for drinking water are set by the U. S. Public Health Service. State and local jurisdictions will certify to the U. S. PHS each year that their supplies conform to these standards, based on continuing surveillance and sampling of the systems.

The certifying agency for the District of Columbia is the D.C. Department of Public Health. To meet this responsibility and to be sure of its certification the Department is required to exercise a supervisory authority over the water supply at various stages in its processing.

The water supply for the District (and for some adjoining jurisdictions) is obtained from the Potomac River on the Maryland side just above Great Falls. Raw water is carried from that intake point to the Dalecarlia installation for first processing, including fluoridation (hydrofluosilic acid). Some water is kept at Dalecarlia for further processing; the rest goes on for its processing to the Georgetown settling basin and then to the McMillan Reservoir.

These 3 locations are the only open reservoirs or 'lakes' in the entire District system. They contain water awaiting additional processing. After filtration and other treatment, water ready for use is then stored in a half-dozen huge covered reservoirs located throughout the District.

The Army Corps of Engineers is responsible for obtaining and processing the District's water; the Department of Sanitary Engineering operates the water distribution system.

Treatment of water will improve its physical, chemical and bacteriologic qualities. Physical refers to taste, odor and appearance; chemical, to toxicity and mineral content; bacteriologic, to the presence of certain microorganisms.

Sampling is carried out at the Potomac intake and at 150 other points throughout the distribution system. During the calendar year 1964 there were 5,611 samples collected and analyzed to determine water quality. This averages 470 per month, against the PHS standard of 320. Each sample is separated into 5 portions for analysis. There were therefore 28,055 portions tested during 1964, of which only 37 showed coli-

form organisms. This equals .1 per cent, against the PHS standard permitted of a full 10 per cent.

In chemical analysis of the finished water product, the District's water supply in 1964 met PHS standards as to the following: turbidity, odor, radioactivity (gross beta activity), color, pH, lead, fluoride, arsenic, selenium, hexavalent chromium, alkalinity, sulphates, chlorides, iron and manganese, zinc, magnesium, copper, phenolic compounds and total solids.

Although not required at the time by the U. S. PHS, the District's water was also checked for synthetic detergents (ABS), for carbon chloroform extract (CCE), and for silver and barium.

Sampling of raw water at the intake showed a coliform bacteria average of 11,271 per 100 ml. Samples taken at consumer taps during that year (1964) showed a coliform drop to 0.06 per 100 ml. This would indicate effective processing by the District water system.

This system can handle 264 million gallons of water a day in nominal operation and can reach 340 million at maximum. During 1964, the average daily demand was only 170 million gallons and on peak days it reached 259 million gallons. Both of these figures are therefore well within the capacity of the treatment and distribution system.

Water usage data are based on consumption by 1.1 million persons because the system services some areas outside the District in Virginia. Average daily consumption is given as 154 gallons per capita.

The coöperative efforts of the Army Engineers, the Department of Licenses and Inspections, the Department of Sanitary Engineering, and of other interested agencies provide the Washington area with drinking water which is safe, pure and plentiful.

MURRAY GRANT, M.D., D.P.H.
D. C. Director of Public Health



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Medicolegal Abstracts

Surgical Risk: Two recent cases involving cardiac deaths in surgical patients illustrate problems in preoperative evaluation of risk.

In one case a patient scheduled for elective abdominal surgery suffered an asthmatic attack the night before operation. Three hours after the attack had been brought under control the operation was performed. During surgery she suffered cardiac arrest and died very shortly.

The surgeon was sued for negligence on the basis that he should have postponed the surgery until the patient had recuperated from the attack. The court ruled that he was, indeed, negligent, and the Michigan intermediate appellate court upheld this decision.

In another case a patient died of a heart attack 2 days after an elective cholecystectomy. An electrocardiogram was done preoperatively, but the physician who read the tracing did not know that another had been done 2 months previously, hence did not compare the 2. Although later comparison of the 2 did not indicate a myocardial infarction, the autopsy showed an area of heart damage which had apparently occurred within a month of death.

The surgeon in this case was not held liable by a Florida appellate court. It felt that the evidence might indicate an honest error in judgment, but did not raise a genuine issue of negligence. The same court also held that the hospital was not negligent in failing to supply the previous electrocardiogram for comparison preoperatively.

COMMENT: Both these cases indicate the necessity of making as accurate an evaluation of operative risk as possible. When there is serious medical disease in the surgical patient, the risk of that disease itself as well as its relation to surgical risk must be considered. From a legal standpoint both these surgeons might have been in stronger positions if they had had consultative opinions preoperatively.

An electrocardiogram alone is an inadequate means of evaluating cardiovascular function, as the second case demonstrates.

One more point emerges from the second case. All records, such as electrocardiograms, should be so well cross-filed that it is immediately clear whether a previous examination has been done in that hospital. The report or, in this case, the

electrocardiogram itself should be freely available.

M-L

Nurses' Indifference: In West Virginia the parents of a 13-year-old girl who died of acute rheumatic fever sued the hospital, alleging that the nurses refused to come into the child's room to check on her condition despite the repeated pleas of the mother. The trial court found in favor of the hospital, but the West Virginia Supreme Court reversed this finding and remanded the case for a new trial. It found that the evidence presented, as well as some which was improperly excluded, was sufficient to support a finding of negligence on the part of the nurses.

In this case the doctor left the mother with her child and with instructions to call the nurses from across the hall if any of the symptoms of heart failure developed. The mother thought such symptoms did develop and went across the hall every 10 to 15 minutes to ask the nurses to check her child. They did not respond. Finally, at nearly 1 a.m. she contacted the Supervisor of Nurses. Upon examining the child this nurse immediately called the doctor. He came at once but his ministrations were in vain, and the patient died.

COMMENT: When a member of a patient's family is left in place of a private duty nurse, it would seem prudent not only to tell the family member when to call upon the nurses, but also to instruct the nurses as to the necessity of responding to such a call. The physician might also order the nurses to check the patient every hour or 2, as he deems necessary, to insure that proper care is given even if the family member overlooks significant symptoms or signs.

M-L

Pharmacist's Liability: In a previous column we reported that a pharmacist's license had been suspended because of an alleged substitution. He had dispensed Elixir of Donnatal® from a stock bottle properly labeled in filling a valid prescription. Subsequent extensive tests revealed that the substance was not Donnatal but another substance very similar to it. He asserted that he had used the bottle in good faith and had not tampered with it in any way. The court held, however, that he was responsible for dispensing precisely that for which the ordering prescription was written.

Our Freshmen*

"THE UPPER CLASSMEN, the faculty and everyone in the office of the Dean take special pleasure in greeting the 107 new members of the first-year class. You were selected from a total of 1,965 applicants. In addition to your aptitudes, which were well above the national average of students accepted to medical schools, we find that you have certain other qualifications. Twelve members of your class are the sons of physicians (6 of whom were graduates of our school)... More than 90 per cent of your class have college degrees; 1 member has a Master of Science degree and 2 have Ph.D.'s. There are 8 young women in the class. Music has a prominent place in your backgrounds. Fourteen freshmen have had active interests in college bands or orchestras."

*EDITOR'S NOTE: In extending greetings to the first-year class at the Opening Assembly of George Washington University School of Medicine, September 13, Dean John Parks enumerated with justifiable pride some of the qualifications of the incoming students.

The Texas Supreme Court has overturned this suspension. It felt, in essence, that in order to suspend a license for substitution the evidence must show a conscious substitution. It found that such was not the case here.

M-L

Osteopaths and the Medical Society: In New York, the County of Queens Medical Society was ordered to admit to membership an osteopath who had a license to engage in the unlimited practice of medicine and surgery.

The Medical Society's rules for admission included the requirement that the applicant have an M.D. degree from an approved school. This requirement was declared unreasonable and void by the trial court as it ordered the admission of the osteopath.

The court observed that the Society's claim that it would be unethical for a doctor of medicine to associate with an osteopath because osteopaths are cultists was a supercilious rejection of the state's public policy, which places the 2 upon a professional par.

The court also observed that membership in the Medical Society is different from that in a fraternal order or social organization since one's livelihood may depend upon Medical Society



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Side effects are possible but very rare: vesiculation, ulceration or necrosis at test site. Contraindications, none; but use with caution in active tuberculosis. *Available* as the new individually-capped unit, boxes of 5, or in cartons of 25.

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membership. In fact, this case was brought because the osteopath was refused hospital privileges on the grounds that he was not a member of the local Medical Society.

ROBERT R. MONTGOMERY, M.D.

Study of Diseases of Calcium Metabolism

THE COÖPERATION OF PHYSICIANS is requested in a continuing clinical study of calcium metabolism and calcium kinetics being conducted by the Metabolism Service, National Cancer Institute at the Clinical Center, National Institutes of Health, Bethesda, Md.

Of interest for this study are patients with hypoparathyroidism, hypercalcemia of malignancy without bony metastases, Paget's disease, osteogenesis imperfecta, and idiopathic osteoporosis in males. Patients with roentgenologic evidence of bone disease as well as documented serum calcium abnormalities would be of special interest.

Patients for this study should be clinically stable, ambulatory, continent of urine and feces, and be willing to participate in metabolic balance studies, including administration of Ca^{47} , during a 30-day admission to the Clinical Center.

Physicians interested in having their patients considered for this study may write or telephone James Phang, M.D., Clinical Center, Room 3-B-40, National Institutes of Health, Bethesda, Md. 20014; telephone: 656-4000, ext. 63097.

Woman's Auxiliary Notes

THE FIRST ANNUAL ASSEMBLY of the Woman's Auxiliary, which will be held later this month (I am writing these notes early in November), will also commemorate our fortieth anniversary. The enthusiasm of the Assembly Committee is most stimulating and will no doubt spread to the entire membership.

Many of the wives of doctors were introduced to medical activities by training as nurses, medical secretaries, technicians, or through other allied medical activities. Others acquired their interest by matrimony. All of us, regardless of our previous experiences, have had to learn to answer the telephone when patients call at the home and to adjust to unpredictable hours regarding meals and social activities. This was not too difficult

for us, because the practice of medicine was supreme in our homes and we soon caught the spirit of helping our husbands. It did not take long to learn to make household activities flexible, to give nonprofessional advice to patients, and to get the necessary duties done whenever we could.

In 1925 the wives decided to do even more and organized the Woman's Auxiliary to the D. C. Medical Society. Each year the scope of its activities has increased, drawing us closer to the formal functions of the Medical Society. This increased



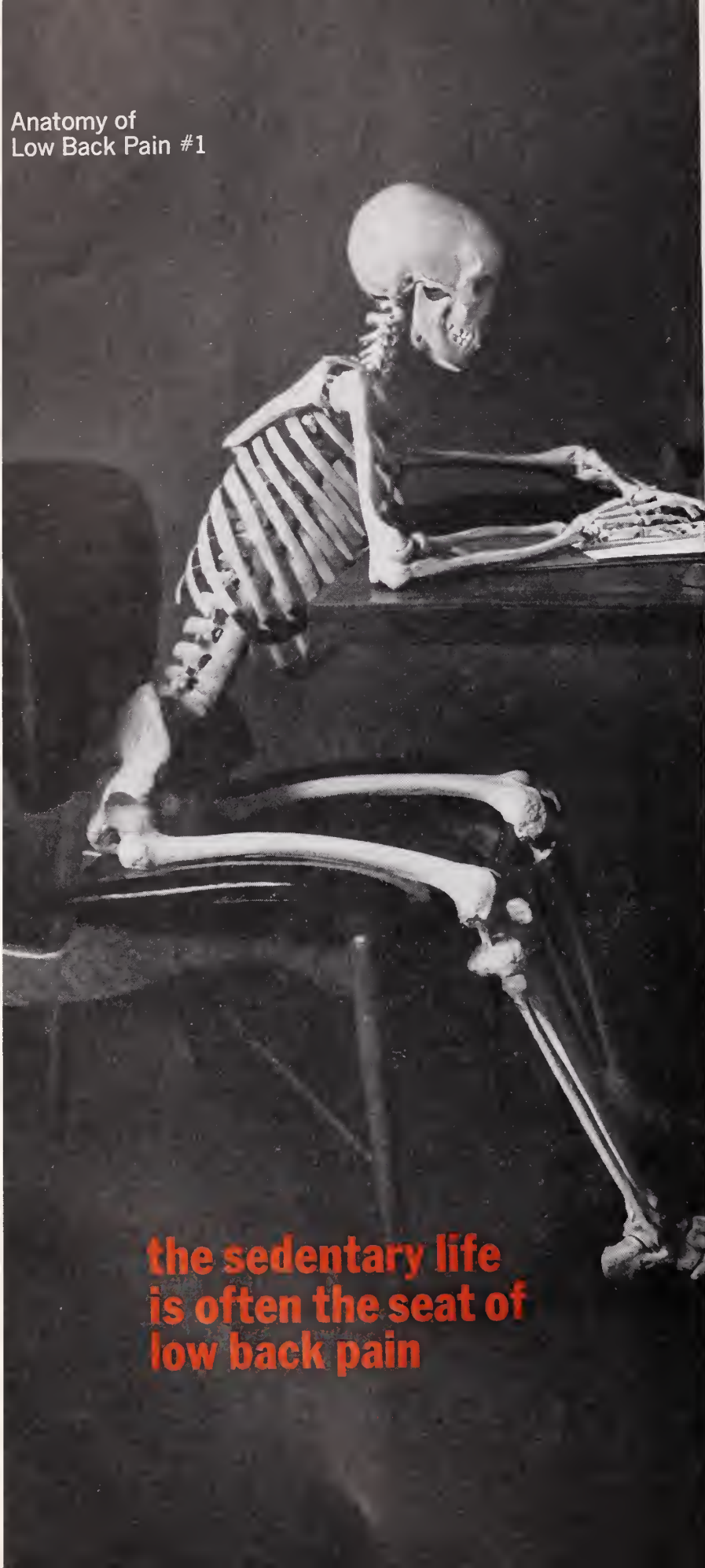
MRS. O. HUGH FULCHER, President of the Woman's Auxiliary, 1965-1966

interest stimulated the Auxiliary to plan the First Annual Assembly concurrently with the ANNUAL SCIENTIFIC ASSEMBLY of the Medical Society. I predict that this Assembly will result in a better recognition by the physicians of our activities. It should also stimulate greater teamwork between the parent organization and its Auxiliary.

The support which I have received thus far in my administration from both the members of the Auxiliary and from the officers of the Medical Society has encouraged me greatly. I need this continued support so much for a successful year.

MRS. O. HUGH FULCHER
President

Anatomy of
Low Back Pain #1



**the sedentary life
is often the seat of
low back pain**

The human spine is not engineered for prolonged sitting at desks, pianos, typewriters and drafting boards. The stresses set up by the heavy, forward-tilted head and trunk, balanced precariously on an insufficient base, result in strain of the dorsal musculature, particularly at the low lumbar level.

The unusual muscle-relaxant and analgesic properties of 'Soma' make it especially useful in the treatment of low back sprains and strains. 'Soma' is widely prescribed ☐ to relieve pain ☐ to relax muscles ☐ to restore mobility.

Indications: 'Soma' is useful for management of muscle spasm, pain, and stiffness in a variety of inflammatory, traumatic, and degenerative musculoskeletal conditions. It also may act to normalize motor activity in certain neurologic disturbances.

Contraindications: Allergic or idiosyncratic reactions to carisoprodol.

Precautions: 'Soma', like other central nervous system depressants, should be used with caution in patients with known propensity for taking excessive quantities of drugs and in patients with known sensitivity to compounds of similar chemical structure, e.g., meprobamate.

Side Effects: The only side effect reported with any frequency is sleepiness, usually on higher than recommended doses. An occasional patient may not tolerate carisoprodol because of an individual reaction, such as a sensation of weakness. Other rarely observed reactions have included dizziness, ataxia, tremor, agitation, irritability, headache, increase in eosinophil count, flushing of face, and gastrointestinal symptoms.

One instance each of pancytopenia and leukopenia, occurring when carisoprodol was administered with other drugs, has been reported, as has an instance of fixed drug eruption with carisoprodol and subsequent cross reaction to meprobamate. Rare allergic reactions, usually mild, have included one case each of anaphylactoid reaction with mild shock and angioneurotic edema with respiratory difficulty, both reversed with appropriate therapy. In cases of allergic or hypersensitivity reactions, carisoprodol should be discontinued and appropriate therapy initiated. Suicidal attempts may produce coma and/or mild shock and respiratory depression.

Dosage: Usual adult dose is one 350 mg. tablet three times daily and at bedtime.

Supplied: Two Strengths: 350 mg. white tablets and 250 mg. orange, two-piece capsules.

Before prescribing, consult package circular.

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NEWS & PERSONALS

Summary of Executive Board Actions

The Executive Board of the Medical Society of the District of Columbia held a dinner meeting in the Society's building, November 1, 1965. Presiding at the meeting was Dr. Duane C. Richtmeyer, Chairman. Present also were Drs. C. Willard Camalier, Jr., Robert J. Coffey, Karl C. Corley, Darrell C. Crain, Raymond T. Holden, Kenneth L. McCoy, Edward W. Nicklas, Paul R. Wilner, and Mr. George W. Cooley, Secretary. Dr. John W. Latimer, Chairman of the Committee on Emergency Medical Service, was an invited guest.

Committee Meetings: The Secretary reported that the following meetings had been held since the last meeting of the Board:

- | | | |
|--------------|---|-----------|
| September 29 | Committee on Aging | 7:30 p.m. |
| | 30 Traffic Committee | 8:30 a.m. |
| October | 1 Fee Review Committee | |
| | 7 Liaison Committee with United Planning Organization | |
| | 12 Committee on Public Information and Education | |
| | 12 Committee on Alcoholism | |
| | 13 Board of Credentials | |
| | 14 Liaison Committee with Public Health Department | |
| | 18 Committee on Mental Health | |
| | 18 Meeting of Tellers | |
| | 21 Traffic Committee | |
| | 22 Liaison Committee with Federal Agencies | |
| | 22 Special Postgraduate TV Program Committee | |
| | 26 House and Building Fund Committee | |
| | 27 Committee on Child Welfare | |
| | 27 Committee on Occupational Health | |
| | 28 Liaison Committee with Clergy | |
| | 28 Medical Bureau Committee | |
| | 29 Nominating Committee | |

Board of Credentials: The Executive Board approved for membership the following applicants recommended by the Board of Credentials.

Active Members

Yuill Black, 1150 Connecticut Avenue, N.W.
 Bernard J. Hillig, Providence Hospital
 Glenn Duane Legler, 7505 Avon Court, S.E.
 Lawrence F. Misanik, D. C. General Hospital
 Mark Norman Ozer, Children's Hospital
 Hugh Van Sickle, 1800 R Street, N.W.
 Joseph T. Sobota, 915 19th Street, N.W.
 David S. Sprague, St. Elizabeths Hospital
 Harold W. Wylie, Jr., 1800 R Street, N.W.

Associate Members

Rafael A. Borgos, 2910 South 31st Street, Arlington, Va.
 Fernando Echverria, 3308 Dodge Park Road, Landover, Md.
 Edward J. Feroli, 11125 Rockville Pike, Rockville, Md.
 Harold W. Glatly, 2101 Constitution Avenue, N.W.
 Edmond Rodriguez, 3611 Branch Avenue, S.E.
 Mohamad N. Sherry, 4637 Eastern Avenue, N.E.
 Yilmaz Yamaner, 3400 Toledo Terrace, Hyattsville, Md.

Transfers

Honorary to Active: Janet G. Travell
 Active to Associate: Donald Datlow and Timothy O'Donovan
 Associate to Active: Ed Baik Chung
 Associate to Resident-Intern: Ira W. Pearlman

Resignations

Active: Brian Charles Dalton and Hardin E. Olson

Honorary membership. It was voted to approve Honorary membership status for Mr. Theodore Wiprud, former Executive Director of this Medical Society.

Emergency Hospital for Civil Defense: Approved in principle was a projected emergency package hospital to be located under Dupont Circle. Dr. Latimer, who described the project to the Board, was authorized to delve into the matter further with the Committee on Emergency Medical Service and report back to the Board.

Income and Expense Report: The Secretary reported on the income and expense for the Soci-

ety for the first 9 months. All activities of the Society except the *MEDICAL ANNALS* continued to operate in the black and it is still anticipated that there will be a net income over expense on December 31.

Estimated Budget for 1966: The estimated budget for 1966 presented by the Secretary-Treasurer was approved for presentation at the Annual Business Meeting. Estimated operating income is \$369,475 and estimated operating expense is \$363,920. It was agreed, however, that the move to the new building might well alter the best estimates that could be given at this time.

Nominees and Nominating Committee: The Secretary reported that the following members had received the highest number of votes when the tellers counted the ballots on Friday, October 29: Victor R. Alfaro, Henry L. Darner, Ralph M. Caulk, Calvin T. Klopp, Harold M. Hobart, William E. Bageant, James A. Curtin, and Russell M. Tilley. (When it was learned that Dr. Alfaro is on an extended trip out of the country, Dr. Tilley, who was eighth in rank, was added to the Nominating Committee.)

Public Law 89-97: It was voted to notify the Secretary of Health, Education, and Welfare that this Medical Society recommends that Medical Service of D.C. be selected as the carrier for Part B of P.L. 89-97 if only 1 carrier is selected aside from the group practice type of plan.

Specialty Listing in Telephone Directory: The policy of listing the specialties of physicians in any portion of the telephone directory was disapproved. Means will be sought to make more prominent the name of the *MEDICAL BUREAU* and its service of providing names and specialties of physicians to the public.

Annual Business Meeting: The date for the business meeting was reaffirmed for Sunday, November 21, at 3:00 p.m. in the Society headquarters.

Cornerstone-laying: A small cornerstone-laying ceremony will be held at 1:00 p.m. prior to the Annual Business Meeting and all members will be notified of this. It was voted to establish a date for the official dedication of the new Society headquarters and to invite the President of the American Medical Association, Dr. James Z. Appel, to that event.

Medical Bureau Committee: A recommendation that the Classification Committee be requested to examine the specialties and subspecialties listed by physicians in the "referral book" was approved. It was voted that it be the

Society's policy that all members under suspension be deleted from the "referral book."

Delegates' Report: Drs. Holden and Camalier reviewed the special session of the AMA House of Delegates (Chicago, October 2 and 3) and received approval for a resolution to be introduced to that House in December calling for such special sessions to be held only on the call of at least 50 members representing $\frac{1}{2}$ of the State Associations.

Medicolegal Committee: The Board approved a new statement on relationships between the Society and the St. Paul Fire and Marine Insurance Company.

College of American Pathologists: The Board approved a statement prepared by the College which provides for the billing of fees by the pathologists rather than by the hospitals.

D. C. Allergy Society: A revised statement concerning tetanus antitoxins prepared by the D. C. Allergy Society was approved and will be published in the *MEDICAL ANNALS*.

Miscellaneous Items: Other items discussed by the Board were: (a) Postgraduate Medical Seminar on VD scheduled for March, 1966; (b) employment of full-time physicians by Federal agencies; (c) liaison with the Department of Public Health; and (d) the administration of XIX of P.L. 89-97.

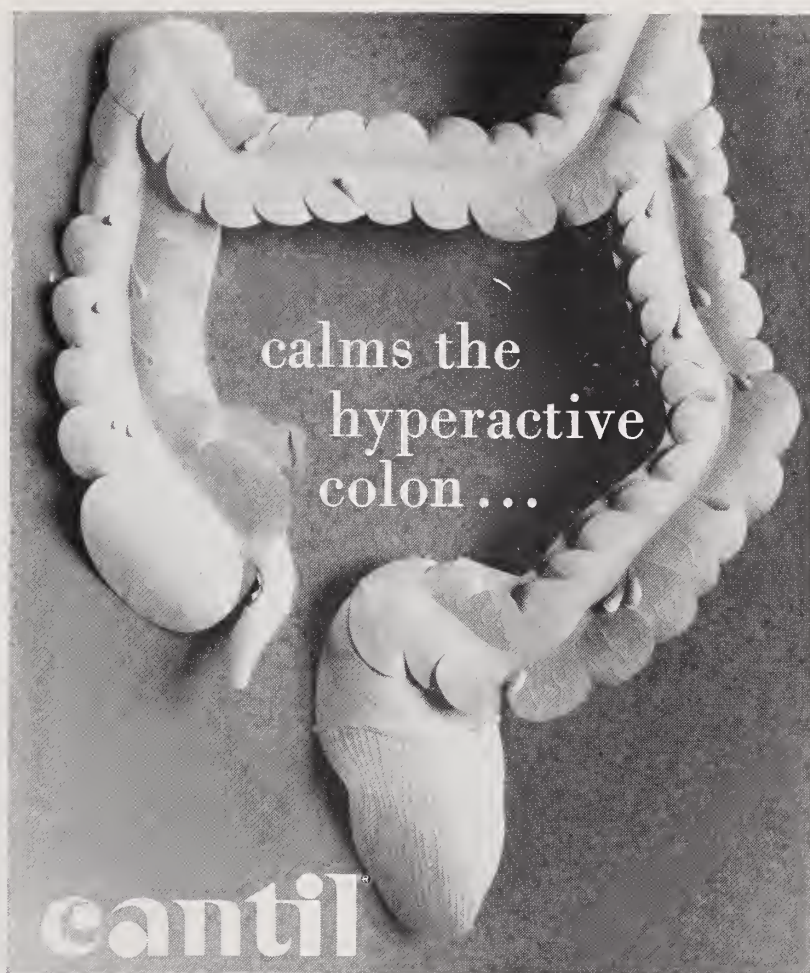
"The Backbone of Medical Journalism"

"The Journal is not an island, entire of itself. Decisions to publish, or not to publish, are the final prerogative of its editor, but they are reached by a process which is often tortuous and contrived. There is no device or schema by which these judgments are achieved. Variable and capricious as they may often appear to be, especially to authors, behind every critical decision lies a third-party view.

"This issue introduces our third parties on page 192."¹ Included in the list were the following members of the D. C. Medical Society:

Roger Baker, Jr.	Laurence H. Kyle
Dale C. Cameron	John F. Maher
James A. Curtin	Andrew A. Marchetti
Paul A. di Sant'Agnese	Thomas W. Mattingly
Edward D. Freis	James M. Moss
Charles F. Geschickter	Joseph Perloff
John Healy	George E. Schreiner

¹ J.A.M.A., 1965 (October 11), 194, 189.



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helps restore normal motility and tone

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- control diarrhea/constipation
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- make patients more comfortable

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"In 40 of 44 cases of irritable or spastic colon, Cantil [mepenzolate bromide] or Cantil with Phenobarbital reduced or abolished abdominal pain, diarrhea and distention and promoted restoration of normal bowel function . . . Cantil [mepenzolate bromide] proved to be singularly free of anticholinergic side-effects. Blurring of vision or dryness of the mouth were occasionally seen and were usually managed with a reduction in dosage. Urinary retention, noted in two cases was eliminated in one by reducing dosage."¹

IN BRIEF:

One or two tablets three times a day and one or two at bedtime usually provide prompt relief. Cantil with Phenobarbital may be prescribed if sedation is required.

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1-Riese, J. A.: Amer. J. Gastroent. 28:541 (Nov.) 1957



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General News

Institutions, organizations, and individuals working in the field of mental retardation are invited to send nominations to the **Joseph P. Kennedy Jr. Foundation** for international awards in that field. These awards are made in 3 general areas, scientific research, service award, and leadership award. Nominations should include biographical information, curriculum vitae, bibliography, and all pertinent supporting data. Nominations received by January 15, 1966 will be considered for the 1966 awards. Nominations should be addressed to International Awards, The Joseph P. Kennedy, Jr. Foundation, 1411 K Street, N.W., Washington, D. C. 20005.

A Psychiatric Walk-in Clinic has been established at Georgetown University Hospital for handling acute psychiatric emergencies. The Clinic operates from 9 a.m. to 5 p.m., Monday through Friday. Crisis-oriented therapy to a maximum of 6 visits is also provided when indicated. This Clinic has been developed both as a community service and as a training facility for residents. For Clinic service, patients should report to the Department of Psychiatry of the Hospital. Fees are paid according to a sliding scale. Further information is available from either Dr. Allan Z. Schwartzberg, telephone 625-7351, or Miss Lida Beth Robinson, 625-7410.

Dr. Albert Z. Romualdez was appointed **Acting Secretary General of the World Health Organization** at the 19th General Assembly of the Association, which was held in London in September. He succeeds Dr. Harry S. Gear, who recently resigned the post of Secretary General to devote full time to the Third World Conference on Medical Education. Dr. Romualdez is a native of the Philippines and has been active in medical and civic activities in that country.

Dr. Stanley P. Mayers, Jr. is the new **Director of Public Health for Arlington County**, succeeding Dr. Ralph G. Beachley, who retired recently. Dr. Mayers is an alumnus of the University of Pennsylvania School of Medicine (Class of 1953) and holds the degree, M.P.H., from Johns Hopkins School of Public Health. For

the past several years he has served at Johns Hopkins as Assistant Professor of Public Health Administration and Assistant Dean of the School.

The Lay Society of the Diabetes Association of the District of Columbia is offering local physicians an informative leaflet about the work of the Society for distribution to diabetic patients. The small, 4-page leaflet explains briefly how the Lay Society can help its members live with diabetes and how it hopes to promote an increased public awareness and understanding of the disease. Physicians wishing a supply of these leaflets should write to the Lay Society of the Diabetes Association, 1718 M Street, N.W., Washington, D. C. 20036. The number needed should be specified.

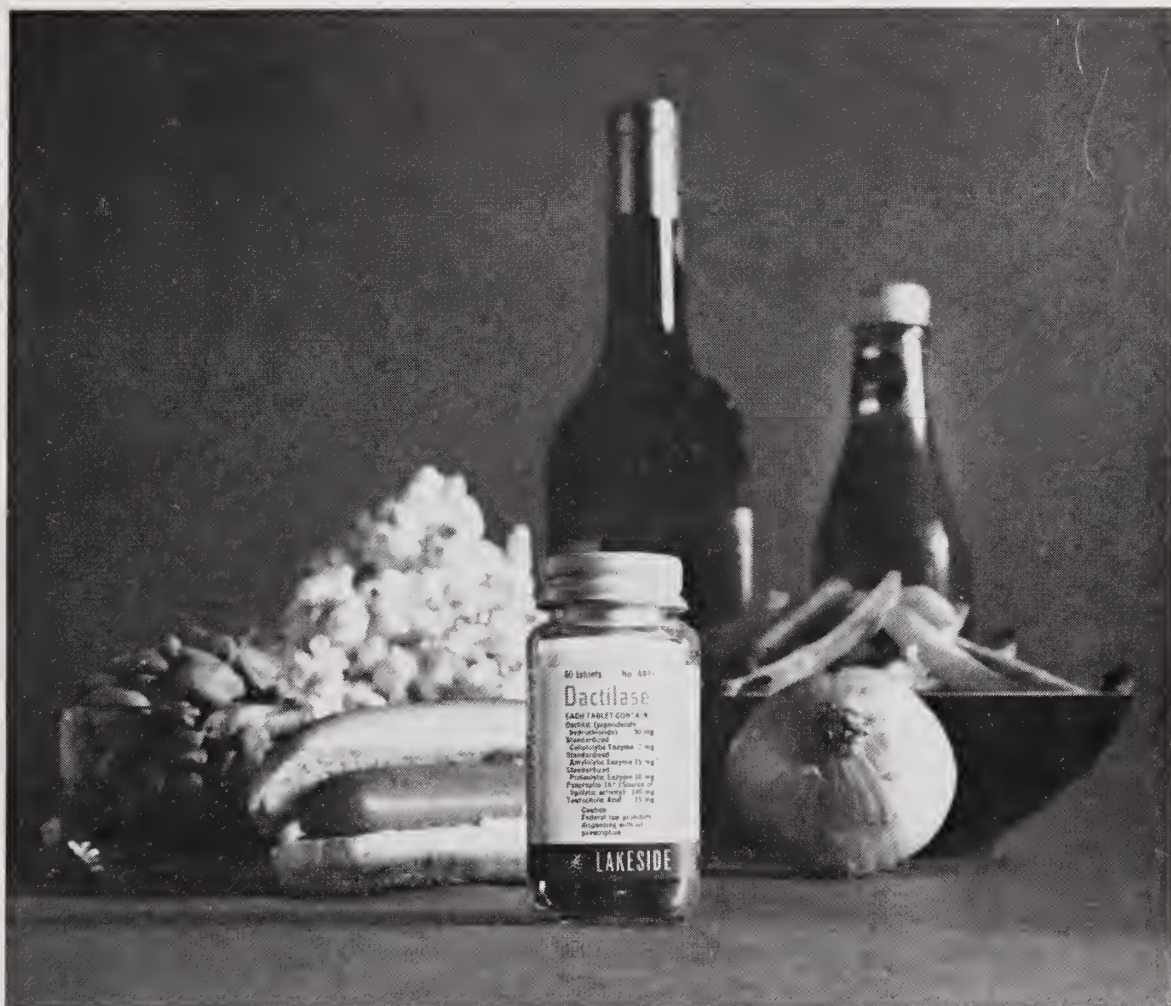
The Lay Society of the Diabetes Association was reactivated in 1964 and now has 146 members. Periodic meetings are held in the auditorium of the Medical Society of the District of Columbia. The Chairman is Mr. Ervin L. Peterson. Medical advisors are Drs. W. Luther Hall, William Kurstin, and E. Clarence Rice.

The first issue of a new Journal, *Medical Opinion & Review*, made its appearance, October 1. According to a news release it will be "the first to be devoted exclusively to the changing professional, social, political, economic, religious, and moral issues affecting the physician as both healer and community leader." An opening editorial states that the first issue is representative of the range of opinion and comment to appear in each monthly issue. The index shows 4 original articles, some feature stories, including 1 each in music, art, film, and science, and 9 book reviews. It is published at 1800 Broadway, New York, N. Y. 10023.

Erratum: In the paper, "Salt-losing Nephritis: Response to Licorice Therapy" by Alvin E. Parrish, M.D. (January 1965 issue of *MEDICAL ANNALS*, page 3) the hydrogen-ammonium cycle resin used was referred to as SKF 647. The number should have been 648.

Personals

Dr. William S. Anderson, Washington pediatrician, was elected Vice President and President-



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lytic enzyme, 15 mg.; Standardized proteolytic enzyme, 10 mg.; Pancreatin 3X** (source of lipolytic activity), 100 mg.; Taurocholic acid, 15 mg.

*Need in human nutrition not established. **As acid resistant granules equivalent in activity to 300 mg. Pancreatin N.F.

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DR. WILLIAM S. ANDERSON, President-elect, the American Academy of Pediatrics

elect of the American Academy of Pediatrics at the Academy's Annual Meeting in Chicago, October 27. He has served as Senior Attending Pediatrician at Children's Hospital since 1946 and is President of the Children's Hospital Research Foundation. He is also a member of the Hospital's Board of Directors, and former Chairman of its Medical Staff.

Dr. Anderson received his medical degree from Johns Hopkins Medical School in 1931 and has been in private practice since 1935. He is Clinical Professor of Pediatrics at George Washington University School of Medicine and a member of the senior attending staffs of the George Washington University Hospital and the Washington Hospital Center. He is also civilian consultant in pediatrics to the U. S. Naval Hospital. He has served in various official capacities with the American Academy of Pediatrics since 1952.

Dr. W. Proctor Harvey, Professor of Medicine and Director of the Division of Cardiology at Georgetown University Medical Center, was elected a Vice President of the American Heart Association, October 18. The election took place at the Annual Meeting of the Assembly of the Association at Bal Harbour, Florida. Dr. Harvey served as President of the Washington Heart Association in 1963-1964 and has long been active on the Professional Education Committee of the Heart Association.

Dr. Helen B. Taussig, Professor Emeritus of Pediatrics at Johns Hopkins University, was

elected President, the first woman to hold that position in the 41-year history of the Heart Association. She will be the featured speaker at a public meeting of the Washington Heart Association in late January.

Dr. Aris Carpousis, wing flight surgeon, who is commissioned Lieutenant Colonel in the Civil Air Patrol, has been awarded the Blue Service Ribbon with the first, second, and third bronze clasps. He was also awarded the unit Citation Award Ribbon. He was notified of the awards on October 29, conveyed to him by order of Colonel Daniel E. Evans, Jr., Commander of the Headquarters National Capital Wing.

Dr. Joseph H. McNinch, who has served as Chief Medical Director of the Veterans Administration since 1963, will retire about January 1, 1966, completing nearly 35 years of Government service. He is an Honorary member of the D. C. Medical Society.

A native of Indiana, Dr. McNinch received his medical degree from Ohio State University in 1930 and the degree, Master of Public Health, from Johns Hopkins University in 1951. He began his Army career in 1930 when he was commissioned a First Lieutenant in the Medical Reserves. He was Commanding General, U. S. Army Medical Research and Development Command, from 1958 to 1960, and Chief Surgeon, U. S. Army, Europe, from 1960 to 1962. Immediately prior to joining the VA he was Director of Research for the American Hospital Association, a post he assumed after his retirement as Major General in 1962.

He will continue his association with the VA medical program in a consultant capacity.

Dr. Robert S. Jason, Dean of Howard University College of Medicine, was elected a director-at-large of the American Cancer Society, October 27, during the Annual Meeting of the Society's House of Delegates in New York City.

Dr. Wallace M. Yater, Editor of the *MEDICAL ANNALS*, was the guest of honor, October 23, at a testimonial dinner at the Madison Hotel. More than 30 ex-fellows and former residents in medicine who had trained under him were present for a social evening and reminiscing. He was presented with a sterling silver cigar box upon which were engraved the signatures of all those present. Dr. Samuel Dessoiff was in charge of arrangements for the dinner.

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Side Effects: Occasional lightheadedness or transient itching which may disappear with continued use. There are no known contraindications; however, caution is advised when there is concomitant administration of a coronary vasodilator.

Administration and Dosage: One or two teaspoonfuls 3 times a day before meals. If flushing is objectionable, dosage may be lowered. However, tolerance to flushing usually develops without loss of efficacy in regard to vasodilation.

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Dr. Arthur E. Cliff advised the Executive Offices of the Medical Society that he retired at the end of October as Chief of the Health and Examining Service of the District of Columbia Department of Public Health.

Dr. Helene G. Warner has been certified a Fellow in the American College of Anesthesiologists.

Letters to the Editor

Cheers for "the Medies"

This is a long overdue letter to express my thanks and commendation for the fine coöperation given me over the years by members of the Society's panel of specialists and general practitioners who have agreed to respond to inquiries from newsmen on technical subjects related to the news.

And I'm moved to write it at this time because of the assistance rendered—far beyond the call of duty, I might add—by Drs. Ernest A. Gould and William S. McCune in the before-during-and-after coverage of President Johnson's 2-in-1 operation on October 8.

Medical coverage of the illnesses of prominent people often requires, from the standpoint of a wire-service reporter at least, virtually immediate answers to technical questions which may arise from brief medical bulletins issued by doctors directly associated with the case.

A number of such situations arose during President Johnson's immediate postoperative period, and the team of Gould and McCune was as responsive as a couple of Minutemen to queries I put to them right from the often-hecktic pressroom at the U. S. Naval Hospital in Bethesda. They were so responsive and coöperative that the results of their brain-picking were often included in the AP's running story within minutes after White House Press Secretary Bill Moyers, or the President's doctors, would issue the latest available information. Thus your doctors did much to help make a complicated story clear to millions of readers of AP newspapers throughout the world.

If I couldn't reach them at their offices, I would contact them at a hospital, and if they were busy with patients of their own at the time they would call me back just as soon as they could and come through with fast, clear explanations of the subject at hand. They were very helpful too in the days immediately preceding the operation, giving guidance on stories describing gall-bladder disease in general, its incidence and prospects for recovery.

I should also like to acknowledge, through you, the kind help I got from Drs. Frank Whitesell and

William Dolan of that fine institution across the Potomac, Arlington, Va., Hospital.

I know that none of these doctors seek recognition for what, to them, is a public service, and I hope I won't embarrass any of them if this letter is published. But I did want to say three cheers for the medics who, until now at least, have been only anonymously referred to in my stories as "Doctors not associated with the case told a reporter, etc. . . ."

Sincerely yours,

FRANK CAREY

Science Writer, The Associated Press

P.S. I might add that, since the above letter was written, I got equally yeoman service from Dr. Benjamin Manchester in connection with former President Eisenhower's heart attack in November.

Obituaries

**Leo Bernard Gaffney, B.S.,
M.D., F.A.C.S.**

(1902-1965)

DR. LEO B. GAFFNEY, Senior Surgeon Emeritus of Providence Hospital, died, October 24, 1965 at Sibley Memorial Hospital.

Dr. Gaffney was born, March 24, 1902 in Milford, Delaware. He was a graduate of the University of Pennsylvania, receiving his Bachelor of Science degree in 1927 and his medical degree in 1929. He interned the following year at Misericordia Hospital in Philadelphia. He continued his training under a fellowship in surgery at the Cleveland Clinic for 2 years and for 3 years was surgical resident at old Gallinger Municipal (now D.C. General) Hospital.

Dr. Gaffney was Chief of the Surgical Service at Providence Hospital from 1943 until he retired 3 years ago. He had also served as Chief Surgeon at D.C. General Hospital and Suburban Hospital, and was consulting surgeon to Episcopal Eye, Ear and Throat Hospital. He was on the teaching staff of Georgetown University School of Medicine as Clinical Associate Professor of Surgery.

He was also a prominent Catholic lay leader. He was Past President of the Catholic Youth Organization and an honorary member of the Christian Brothers.

Dr. Gaffney was a Fellow of the American College of Surgeons and a member of the American Medical Association. He was elected to Active membership in the Medical Society of the District of Columbia in 1935. He was a member and Past

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IN BRIEF: ACTIONS AND USES: A single dose of Imferon (iron dextran injection) will measurably begin to raise hemoglobin and a complete course of therapy will effectively rebuild iron reserves. The drug is indicated only for specifically-diagnosed cases of iron deficiency anemia and then only when oral administration of iron is ineffective or impractical. Such iron deficiency anemia may include: patients in the last trimester of pregnancy; patients with gastrointestinal disease or those recovering from gastrointestinal surgery; patients with chronic bleeding with continual and extensive iron losses not rapidly replenishable with oral iron; patients intolerant of blood transfusion as a source of iron; infants with hypochromic anemia; patients who cannot be relied upon to take oral iron.

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ADMINISTRATION AND DOSAGE: Dosage, based upon body weight and Gm. Hb./100 cc. of blood, ranges from 0.5 cc. in infants to 5.0 cc. in adults, daily, every other day, or weekly. The total iron requirement for the individual patient is readily obtainable from the dosage chart in the package insert. Deep intramuscular injection in the upper outer quadrant of the buttock, using a Z-track technique, (with displacement of the skin laterally prior to injection), insures absorption and will help avoid staining of the skin. A 2-inch needle is recommended for the adult of average size.

SIDE EFFECTS: Local and systemic side effects are few. Staining of the skin may occur. Excessive dosage, beyond the calculated need, may cause hemosiderosis. Although allergic or anaphylactoid reactions are not common, occasional severe reactions have been observed, including three fatal reactions which may have been due to Imferon (iron dextran injection). Urticaria, arthralgia, lymphadenopathy, nausea, headache, and fever have occasionally been reported. Initial test doses of 0.5 cc. are advisable.

PRECAUTIONS: If sensitivity to test doses is manifested, the drug should not be given. Imferon (iron dextran injection) must be administered by deep intramuscular injection only. Inject only in the upper outer quadrant of the buttock, not in the arm or other exposed area.

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President of the Washington Academy of Surgery, the Washington Medical and Surgical Society, and the Louis Mackall Medical Society.

His wife, Mrs. Muriel C. Gaffney, of 5009 Tilden Street, N.W., survives him. He leaves 6 sons, David, John, and James C., of Washington; Richard W., of New York City; Thomas H., Baltimore; and Joseph M., of Philadelphia. He also leaves 3 daughters, Ellen, Kathy and Jill, all of the home address.

Francis Xavier Courtney, A.B., M.D.

(1894-1965)

DR. FRANCIS X. COURTNEY, Washington general practitioner, died at the Washington Hospital Center on September 29, 1965, after a long illness.

Dr. Courtney was born in Suffern, New York, July 10, 1894. He served with the Army Corps of Engineers in the American Expeditionary Forces during World War I. Following the War he enrolled at George Washington University, receiving his Bachelor's degree in 1925 and his medical degree in 1928. He served his internship at Providence Hospital.

Dr. Courtney was engaged in private practice from 1929 until 1961. His offices were last at 5601 Fourth Street, N.W.

Dr. Courtney was a Life member of the D.C. Medical Society and a member of the George Washington University Medical Alumni Association and the American Academy of General Practice.

His wife, Mrs. Helen Hurley Courtney, died in 1959. Surviving are a sister, Miss Mary F. Courtney, of the home address, 3737 Legation Street, N.W., and 2 brothers, Daniel P. Courtney, of Merritt Island, Fla., and Thomas A. Courtney, of Bethesda, Md.

Joseph Harris, A.B., M.D.

(1898-1965)

DR. JOSEPH HARRIS, obstetrician and gynecologist, died, October 19, 1965, at George Washington University Hospital. He lived at 601 19th Street, N.W.

Dr. Harris was born in Baltimore, Maryland, May 26, 1898. He received both his Bachelor of Arts and Doctor of Medicine degrees from Johns Hopkins University, the latter in 1923. He in-

terned at Sinai Hospital in Baltimore the following year, and spent another year in residency at Columbia Hospital for Women, Washington. He began his practice in Washington in 1925.

In addition to his private practice, Dr. Harris served on the faculty of George Washington University School of Medicine for 24 years, beginning in 1925. From 1933 to 1949 he was Associate in Obstetrics and Gynecology.

Dr. Harris was elected to Active membership in the District Medical Society in 1927; he was transferred to Special membership in 1964. He was a member of the American Medical Association, the Washington Gynecological Society, and the Jacobi Medical Society.

Surviving him are his wife, Mrs. Edna Harris, and a daughter, Mrs. Miriam Robbin, of Silver Spring, Maryland.

John Hunter Selby, M.D.

(1878-1965)

DR. JOHN H. SELBY, retired radiologist, died at the Veterans Administration Hospital in Washington on August 29, 1965. He lived at the Hunting Terrace Apartments in Alexandria, Va.

Dr. Selby was born in Columbia, South Carolina, on February 27, 1878. He graduated in medicine from the University of Pennsylvania in 1907. After practicing in Warrenton, Va. for 2 years, he went to the Mayo Clinic in Rochester, Minnesota, where he was director of the Roentgen Laboratories for 3 years.

In 1913 he came to Washington to practice his specialty. He was roentgenologist to Children's and Episcopal Eye, Ear and Throat Hospital. During World War I he headed the Department of Radiology at Walter Reed Army Hospital.

After the war, Dr. Selby practiced in San Francisco for a brief period and for 19 years in Akron, Ohio. He came to Alexandria in 1940 and remained there until his retirement in 1951.

While in Washington Dr. Selby was a member of the Medical Society of the District of Columbia. He was a member of the American Medical Association and the American Roentgen Ray Society.

Surviving him are his wife, Mrs. Delia Slaughter Selby; a daughter, Mrs. Catharine Flygare, of Beverly, Mass.; and a son, John Hunter Selby, Jr. of Scottsdale, Arizona.

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BOOK REVIEWS

Management of the Patient with Subnormal Vision. GERALD FONDA, M.D., F.A.C.S. Price, \$11.00. Pp. 161, with 88 figures. St. Louis: Mosby, 1965.

The author draws from his wealth of personal experience to describe a practical approach to the problems involved in low-vision aids. The emphasis throughout the book is on simple, concise explanations and advice, which is carried over to the necessary background material in magnification and optics. The type face is easy to read and the material well outlined, which is perhaps a fortunate reflection of the author's concern with low-vision problems.

Dr. Fonda points out that the subnormal vision examination requires only a slight extension of the complete ophthalmologic examination and is not as time-consuming as previously thought. In 30 per cent of patients only 1 eye need be corrected. A spectacle reading lens of +4 to +20 diopters is usually prescribed, but not infrequently, especially in the older age group, a focusable stand magnifier is preferred. Telescopic visual aids are heartily condemned because the resulting narrow visual field completely incapacitates the patient. These experiences are similar to those in our own Low Vision Aid Department.

This book is strongly recommended to all ophthalmologists as it will certainly encourage more attention to this distressing problem.

HOWARD N. BERNSTEIN, M.D.

Synopsis of Cardiology. WILLIAM I. GEFTER, A.B., M.D., F.A.C.P., BERNARD H. PASTOR, A.B., M.D., F.A.C.P., AND RALPH M. MYERSON, B.S., M.D., F.A.C.P. Price \$9.85. Pp. 877, with 240 illustrations. St. Louis: Mosby, 1965.

This new member of the Mosby Synopsis Series summarizes in a comprehensive and readable manner a field which has expanded explosively in the last decade. The familiar maroon binding, large print, and excellent illustrations add to the value of the book.

Like others in this series, "Synopsis of Cardiology" gives a general view of its subject useful to the student of medicine, the physician who is not a cardiologist or general internist, and people in paramedical fields.

There are 6 sections. The first on "The Cardiovascular Examination," written largely by Dr. Pastor, is outstanding. The chapters on electrocardiography and cardiac roentgenology, especially, are lucid, exceptionally well illustrated, and cover their subjects thoroughly. The same may be said of the third section on "The Arrhythmias," which is written entirely by Dr. Pastor. These chapters enter into more detail than one expects from a summary of the subject but do so to excellent advantage. Only the matter of electrical pacing in A-V block seems to be inadequately discussed.

The fourth section deals with "Types and Causes of Heart Disease" and includes chapters written by each of the 3 authors. Among the best chapters are those by Dr. Pastor on cor pulmonale and Dr. Gefter's discus-

sion of ischemic heart disease, the latter presented clearly and concisely. "Hypertension and Hypertensive Heart Disease," also by Dr. Gefter, is disappointing. It is not well organized and not entirely accurate, for example, in stating (page 493) that "excessive aldosterone secretion in adrenocortical adenomas or hyperplasias is associated with hypertension, often of the malignant type." There is also no sequential description of the systematic diagnostic approach to the patient with hypertension. The paragraphs on the selection of therapy for hypertension, on the other hand, are quite good. Most of the remaining chapters on etiologic forms of heart disease are written by Dr. Myerson in a factual, understandable, and comprehensive manner.

Section five, by Dr. Myerson, on "Diseases of the Aorta and Pulmonary Vasculature" is of good quality.

The last section is devoted to special problems, including anticoagulants; diet, alcohol, tobacco, and exercise; pregnancy; surgery; workmen's compensation; insurability; rehabilitation; and air travel as related to cardiac disease. These chapters are by Dr. Gefter and are, for the most part, satisfactory. The longest deals with surgery in cardiac patients, especially surgery of the heart and great vessels; although there is much information given on this complex subject, it could be presented perhaps in a more easily digestible form.

The bibliographies are, in general, adequate; and the index, that most important feature, is excellent.

This Synopsis is a useful contribution to the medical literature.

NELSON G. GOODMAN, M.D.

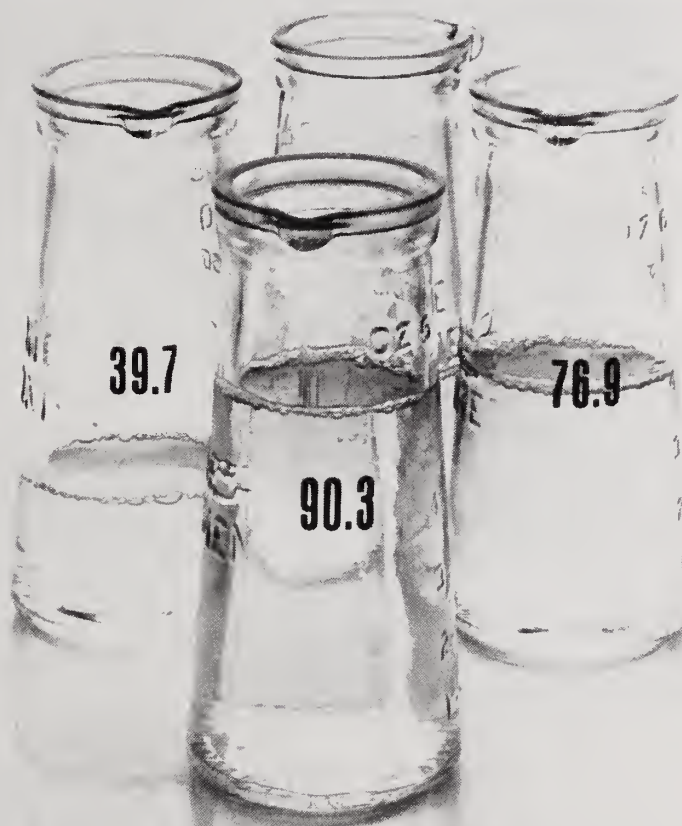
Problem Cases from Fracture Grand Rounds at the Massachusetts General Hospital. WILLIAM HAMILTON HARRIS, M.D., WILLIAM NORMAN JONES, M.D., AND OTTO E. AUFRANC, M.D. Price, \$20.00. Pp. 371, with 199 figures, including 5 in color. St. Louis: Mosby, 1965.

This book is a compilation of the "Fracture of the Month" series from *The Journal of the American Medical Association*. The cases are from the Fracture Grand Rounds at the Massachusetts General Hospital.

These case reports are divided into anatomic areas for easy reference, and the book should be of value in those difficult cases where consultation is most appreciated. There is a "team approach" to handling these fractures and the reader is given the benefit of varying, and frequently conflicting, ideas as to management. There follows a history of how the case progressed as well as the final result and some retrospective comments. They make the book interesting reading as well as quite informative.

It must be remembered, however, that this book presents the more complicated and difficult cases with a majority of them being treated surgically; it is not meant to advocate open treatment for the majority of fractures. The preface states quite wisely that most long

(Continued on page 34)



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*Gold, H., *et al*: Closed Panel Conference: Present Status of the Management of Congestive Failure and Advances in Diuretic Therapy, *Journal of New Drugs*, 1:177, July-August, 1961.

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CONTRAINDICATIONS: Complete renal shutdown; rising azotemia or development of hyperkalemia or acidosis in severe renal disease; demonstrated hypersensitivity.

HOW SUPPLIED: Bottles of 100 and 1000 tablets.

Book Reviews

(Continued from page 32)

bone fractures respond to closed manipulation very satisfactorily and the use of surgical means in these difficult cases is not intended to stress surgery unduly.

On the whole it is a very good collection of problem cases with excellent management ideas and discussion and should be worthwhile reading to those surgeons facing the difficult cases that fail to respond to more routine manipulations and management. And this is done in a way that to me is most practical, by the recommended treatment of individual cases.

ROBERT E. COLLINS, M.D.

With Every Breath You Take. The Poisons of Air Pollution, How They Are Injuring Our Health, and What We Must Do About Them. HOWARD R. LEWIS. Price, \$5.00. Pp. 322, illustrated. New York: Crown, 1965.

This book is one of the most interesting concerning a medical and community problem that you will find. Not only is it filled with accurate information, but it is easily read and brings to life heretofore statistical presentations of Donora, London Fog 1954, and others.

The background for an understanding of air and its origins, of pollution and its origins, and of solutions to the problems is most clearly and vividly presented.

To demonstrate the attitude of the writer and the pleasure of reading the book, I should like to quote one paragraph:

"Public pressure is the only force that can reach into the halls of government and counteract industrial opposition to air pollution control. In politics, as elsewhere in life, the squeakiest wheel gets the most grease. Thus, it is no coincidence that the community with the most advanced pollution-control program—Los Angeles County—also has had the strongest and most vocal support of an aroused public."

If you want an evening of interest and learning in a painless manner, "With Every Breath You Take" will meet your need!

DONALD P. CONWELL, M.D.

Ciba Foundation Study Group No. 19: Comparative Biochemistry of Arginine and Derivatives. Edited by G. E. W. WOLSTENHOLME, O.B.E., M.A., M.B., F.R.C.P., AND MARGARET P. CAMERON, M.A. Price, \$2.95. Pp. 103, with 11 illustrations. Boston: Little, 1965.

This is one of a series of publications sponsored by the Ciba Foundation. Each publication contains the proceedings of a symposium sponsored by the Foundation. The present volume covers a symposium held in April 1964 under the chairmanship of Professor Jean Roche of the University of Paris. Four formal papers and concomitant discussions cover recent aspects of arginine metabolism in microorganisms, animals, and plants. Detailed bibliographies accompany each section.

Workers in the biochemistry of the amino acids will find the work pertinent and complete.

Of particular interest to the internist is the discussion by Dr. R. G. Westall, of London, of a new inborn error of metabolism, the excretion of argininosuccinic acid. This error in the urea cycle was found in children. He also found a closely related disorder in which citrulline was excreted. In both instances there was an accompanying mental retardation. It is of interest that all metabolic diseases of this type, including phenylketonuria, involved mental retardation.

Perhaps symposia such as this one will help future investigators find ways of controlling the enzymatic reactions in amino acid metabolism so that missing systems can be supplied to permit complete neurologic development in children.

WALTER C. HESS, Ph.D.

Ciba Foundation Symposium: Cardiomyopathies. Edited by G. E. W. WOLSTENHOLME, O.B.E., M.A., M.B., F.R.C.P., AND MAEVE O'CONNOR, B.A. Price, \$12.50. Pp. 428, with 136 illustrations. Boston: Little, 1964.

A major part of this Symposium is devoted to the entity of the hypertrophic obstructive type of cardiomyopathy. The participants in this part of the Symposium were well chosen and include the outstanding contributors throughout the world. The present state of knowledge relative to etiology, pathology, histochemistry, electron microscopy, clinical features, hemodynamics, roentgenographic findings, surgical therapy, and pharmacodynamics are thoroughly discussed. I doubt if an additional participant could have added much to our present understanding of this entity. The possibly related subject of drug-induced myocardiopathy is also included. There is an excellent presentation of the physiology of cardiac contraction, its relationship to sympathetic nervous system activity, and the possibility that a derangement of function of the sympathetic nerves to the heart may be etiologically related to this entity.

Other forms of cardiomyopathy are only briefly discussed but those included are excellent. The section on viral myocarditis by Burch and Depasquale represents the best, well organized material published on this subject. The possible relationship of viral myocarditis to subacute and chronic forms of idiopathic myocarditis and cardiomyopathies is discussed.

The presentations on fibroelastosis and the myocardial lesions of Friedreich's disease bring our knowledge up-to-date on these myocardial derangements.

The only criticism of this Symposium is that under the title of Cardiomyopathies undue time was given to the hypertrophic obstructive type, which is a relatively infrequent type, whereas little time was devoted to the more frequent types. Perhaps a subsequent symposium may include participants who have contributed much to other forms.

THOMAS W. MATTINGLY, M.D.

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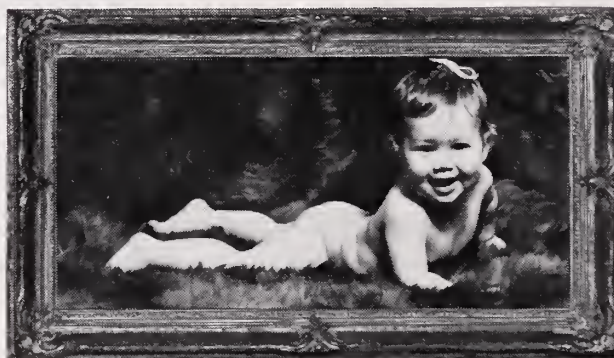
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1—Pomeranze, J., and Gadek, R.J.: Am. Pract. & Digest Treat. 8:73-77 (Jan.) 1957

2—Asher, L.M.: Am. J. Digestive Diseases 4:272 (Apr.) 1959

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NATIONAL AND REGIONAL MEETINGS

January 19–21: American Diabetes Association, 13th Postgraduate Course. The Mayflower, Washington. Address: Mr. J. Richard Connelly, Executive Director, 18 East 48th Street, New York, N. Y. 10017.

January 31–February 3: National Academy of Sciences—National Research Council: Public Symposium on Scientific Aspects of Pest Control. Auditorium, Department of State, Washington. Address: Agricultural Board, NAS–NRC, 2101 Constitution Avenue, N.W., Washington, D.C. 20418.

February 2–6: American College of Cardiology. Conrad Hilton Hotel, Chicago. Address: Mr. William D. Nelligan, Executive Director, 9650 Rockville Pike, Washington, D.C. 20014.

February 14–19: American College of Physicians, Postgraduate Course No. 11: Medical Genetics. Johns Hopkins University School of Medicine, Baltimore. Address: Dr. Edward C. Rosenow, Jr., *Executive Director*, 4200 Pine Street, Philadelphia, Pa. 19104.

February 21–23: 22nd Annual Meeting of American Academy of Allergy. Americana Hotel, New York. Address: Mr. James O. Kelley, *Executive Secretary*, 756 North Milwaukee Street, Milwaukee, Wis. 53202.

February 28–March 3: Southeastern Surgical Congress. Marriott Motor Hotel, Atlanta. Address: Dr. A. H. Letton, *Executive Secretary*, 340 Boulevard Northeast, Atlanta, Ga. 30312

April 4–8: 39th Annual Spring Congress in Ophthalmology and Otolaryngology. Gill Memorial Eye, Ear and Throat Hospital, Roanoke, Va. Address: Superintendent, P. O. Box 1789, Roanoke, Va.

May 21–22: AMPAC National Workshop. Sheraton-Park Hotel, Washington.

June 25: American Association for the Study of Headache. Conrad Hilton Hotel, Chicago. Address: Dr. Seymour Diamond, *Secretary*, 5214 North Western Avenue, Chicago, Ill. 60625

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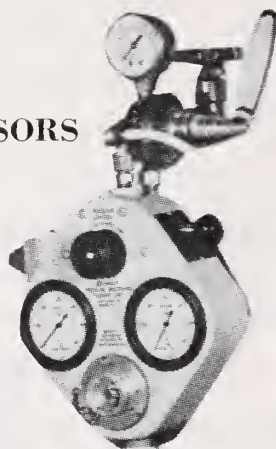
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